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2010 JOINT CBRN CONFERENCE AND EXHIBITION

"Shaping the Combating – WMD Enterprise"

June 22 - 24, 2010
Fort Leonard Wood, MO

On-Site Agenda

Wednesday, June 23, 2010

COMBATING – WMD KEYNOTE ADDRESSES:

- *Mr. Andrew Weber, Asst. to SECDEF for Nuclear and Chemical and Biological Defense Programs*
- *Maj Gen John Howlett, Deputy Director, SCC-WMD, DTRA*
- *RDML Daniel Abel, Deputy Director of Operations, USNORTHCOM*

COMBATING-WMD ENTERPRISE PANEL

MODERATOR: *COL Tom Woloszyn, USA Mil. Asst, DASD, CBD/CM*

PANEL

- *COL William Barnett, USA Director, JRO*
- *BG Jess Scarbrough, USA JPEO-CBD*
- *Mr. John Connell*
- *Mr. Joseph Wienand, Acting Director, ECBC (Invited)*

INDUSTRY SUPPORT: CHEM BIO ACQUISITION INITIATIVES UPDATE

- *Dr. John Wade, Chairman, CBDAIF*

TECHNOLOGY SUPPORTING THE COMBATING: WMD ENTERPRISE: ISSSR

- *Dr. James Jensen, Co-Chairman, ISSSR*

Thursday, June 24, 2010

KEYNOTE ADDRESS

- *Mr. Dave Lavers, Director, CBRN Directorate, Joint Capability Coordination Division, Australian Army*

COMBATING- WMD WARFIGHTER PANEL

PANEL

- *COL Jeff Brodeur, USA, CBRN Officer, ARCENT*
- *COL William King, USA, Commander, Dugway Proving Ground*
- *SGM Luis Rivera, USA, CBRN SGM, USARPAC*

The Classification of this Brief is:
UNCLASSIFIED





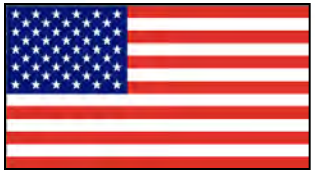
North American Aerospace Defense Command & United States Northern Command

Overview

- **How NORAD and USNORTHCOM Fit Together**
- **Missions**
- **Areas of Operations/Focus**
- **DSCA Operations**
- **CBRN Response Enterprise**

How We Fit Together









PRESIDENT

SECRETARY OF DEFENSE

CHAIRMAN OF THE JOINT CHIEFS OF STAFF

CANADIAN PRIME MINISTER

DEFENCE MINISTER

CHIEF OF THE DEFENCE STAFF

UNITED STATES NORTHERN COMMAND

DUAL - HATTED

NORTH AMERICAN AEROSPACE DEFENSE COMMAND

NORAD & USNORTHCOM Missions

- **NORAD Missions:**
  - **Aerospace Warning**
  - **Aerospace Control**
  - **Maritime Warning**

- **USNORTHCOM Missions:**
  - **Homeland Defense**
  - **Civil Support**

The National Response Framework for DSCA

STATE RESPONSE



STATE GOVERNOR

REQUEST FOR ASSISTANCE

FEDERAL RESPONSE



PRESIDENT

Presidential Declaration

DHS

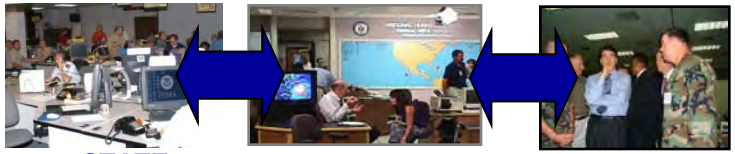
PRIMARY AGENCY

REQUEST FOR ASSISTANCE

DOD RESPONSE

USNORTHCOM

SUPPORT AS DIRECTED



STATE OPS CENTER

JOINT FIELD OFFICE

DEFENSE COORDINATING OFFICER

LOCAL FIRST-RESPONDERS







STATE ASSETS

EMAC





NORAD and USNORTHCOM



Defending

Our

Homelands

NDIA
National Defense Industrial Association

2010 JOINT CBRN CONFERENCE & EXHIBITION

Joint CBRN Conference & Exhibition

June 22-24, 2010

Fort Leonard Wood, MO

AFEI nTsa PSA WIDS

National Defense Industrial Association

Vision

America's leading Defense Industry Association promoting National Security

Mission

- *ADVOCATE: Cutting-edge technology and superior weapons, equipment, training, and support for the War-Fighter and First Responder*
- *PROMOTE: A vigorous, responsive, Government - Industry National Security Team*
- *PROVIDE: A legal and ethical forum for exchange of information between Industry and Government on National Security issues*

2010 Joint CBRN Conference

June 23, 2010 - Morning

9:00 Opening Comments

- NDIA Welcome - BG Dean Ertwine, USA (Ret)
- BG Les Smith - Commandant, US Army CBRN School
- MG David Quantock - US Army MANSCEN

9:10 Combating-WMD Keynote Addresses

- GEN Martin Dempsey - CG, TRADOC
- **Mr. Andrew Weber, Asst. to SECDEF for Nuclear and Chemical and Biological Defense Programs**
- **Maj Gen John Howlett, Deputy Director, SCC-WMD, DTRA**
- **RDML Daniel Abel, Deputy Director of Operations, USNORTHCOM**

11:40 Lunch in Exhibits Tent

2010 Joint CBRN Conference

June 23, 2010 - Afternoon

1:30 Combating-WMD Enterprise Panel

Moderator: **COL Tom Woloszyn**

Panelists:

COL William Barnett	**BG Jess Scarbrough**
Mr. James Cooke	**Mr. John Connell**
COL Brent Bredehoft	**Mr. Joseph Wienand**
COL Darryl Briggs	BG Les Smith

3:30 Industry Support: Chem Bio Acquisition Initiatives Forum Update

- **Dr. John Wade**, Industry Co-Chair

3:45 Technology Supporting the Combating-WMD Enterprise: ISSSR

- **Dr. James Jensen**, Chairman

5:00 Grand Reception in Exhibits Tent

2010 Joint CBRN Conference

June 24, 2010 - Morning

9:00 Opening Comments – COL Frank Cox, USA (Ret)

9:10 Keynote Addresses

- Ms Rebecca K.C. Hersman, Dep Asst SECDEF for Countering WMD, OSD Policy (GSA)
- **Mr. Dave Lavers**, Director, CBRN Directorate, Jt. Capability Coord Div., Australian Defence Forces

10:00 Combating-WMD Warfighter Panel

Moderator: BG Les Smith

Panelists:

COL Tom Cartledge	COL Eric Brigham
COL Jeff Brodeur	COL Bruce Foreman
COL William King	LTC John Grady
Maj Michael Johnson	CSM Ted Lopez
SGM Luis Rivera	

12:00 Lunch in Exhibits Tent

June 24, 2010 - Afternoon

1:00 – 2:30 ISSST Presentations: Bridging the Gap from Emerging Technology to the Warfighter

- Abrams Theater

1:00 – 3:00 NDIA/USACBRNS STEM Initiative: Students Viewing of Exhibits

12:20 – 3:00 Live Demonstrations

- Outside Exhibits Tent

3:00 Conference & Exhibits Close



SUMMARY

- Electronic surveys will be sent to your email addresses immediately after this Conference
- Attendees will be sent a link to the proceedings within two weeks

Please join us next year!

Joint Requirements Office for CBRN Defense

An Overview

JRO – CBRND Roles and Responsibilities

Concepts, Studies/Analysis

- Develop Operational Concepts
- Conduct CBAs
- Participate in experiments, demos and Joint Capability Technology Demos
- Oversee Joint Combat Developer for Experimentation
- Develop/manage studies
- Advocacy for Science & Tech/Modeling & Sim
- Coordinate Threat Assessments & Input
- Develop Analytic Agenda

Mission Area Integration

- Develop Modernization Plan
- Coordinate CbtWMD WG
- Support Protection FCB
- Incorporate CWMD/CBRND Aspects for CPR and CPA
- Joint Capability Area coord
- Protection CPM for CWMD/ CBRND
- Lead POM development
- Coordinate all Joint Staff/J-8 CWMD efforts
- Conduct Program Reviews and Readiness Reviews
- Coordinate liaison support
- Support International Efforts

Future Look

Capabilities Integration

- Identify/develop CBRND materiel capabilities (JCIDS)
- Manage Joint Capabilities Integration Development System documents
- Identify/develop CBRND Passive Defense non-material capabilities
- Provide warfighter advocacy to PMs, T&E, and Science & Tech organizations
- Coordinate Passive Defense doctrine, training and education issues
- Participate in Multi-national agreements with NATO and AUCAUKUS

Consequence Management

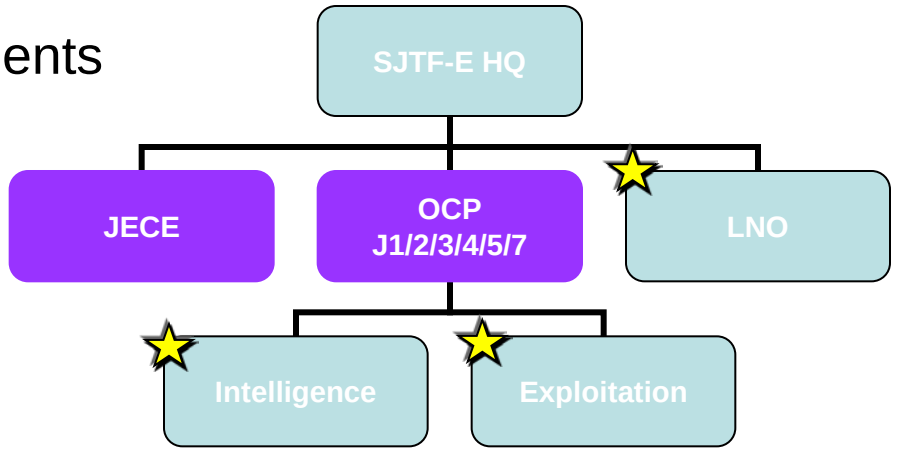
- Facilitate and advocate for domestic and non-domestic CBRN CM material/non-material capabilities
- Joint Staff lead for joint CBRN CM resource issues including POM development and Protection CPM issues
- Joint Staff lead for DoD Installation Protection Program
- Conduct and support CBRN CM capability studies, analyses, and assessments

Medical Integration

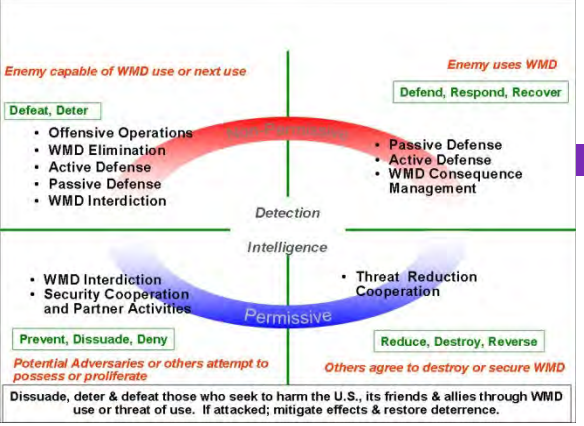
- Integrate and advocate for Medical capabilities across CBRND mission areas
- Manage Medical CBRND JCIDS documents ICW CIB
- Coordinate Medical CBRND capabilities with Services, COCOMs, OSD (ASD HA), Joint Staff, advanced tech developers and Medical S&T
- Participate in NATO Medical CBRN WG and BioMed WG; coordinate with AUCAUKUS Med Requirements Team
- Advise the Director, Deputy Director and JRO decision maker on Medical CBRND aspects

Standing Joint Force HQ-Elimination

- Builds on current Organizations
  - Joint elimination coordination element
  - 20th SUPCOM Operational command post
  - ★ Adds liaison officers
  - ★ Adds Intel and exploitation elements



- Enhances planning, training and exercise support
- Provides core of trained SMEs to reduce response time and increase immediate effectiveness
- Establishes a focus for COCOM support
- Institutionalizes WMD Elimination as a routine regional operation



Mission Areas for Combating WMD

Strategic Goal

Military Strategic Objectives



Interdiction | Threat Reduction Cooperation | Security Cooperation and Partnership Activities | Active Defense | Elimination | Passive Defense | Offensive Operations | WMD Consequence Management

Strategic Enablers

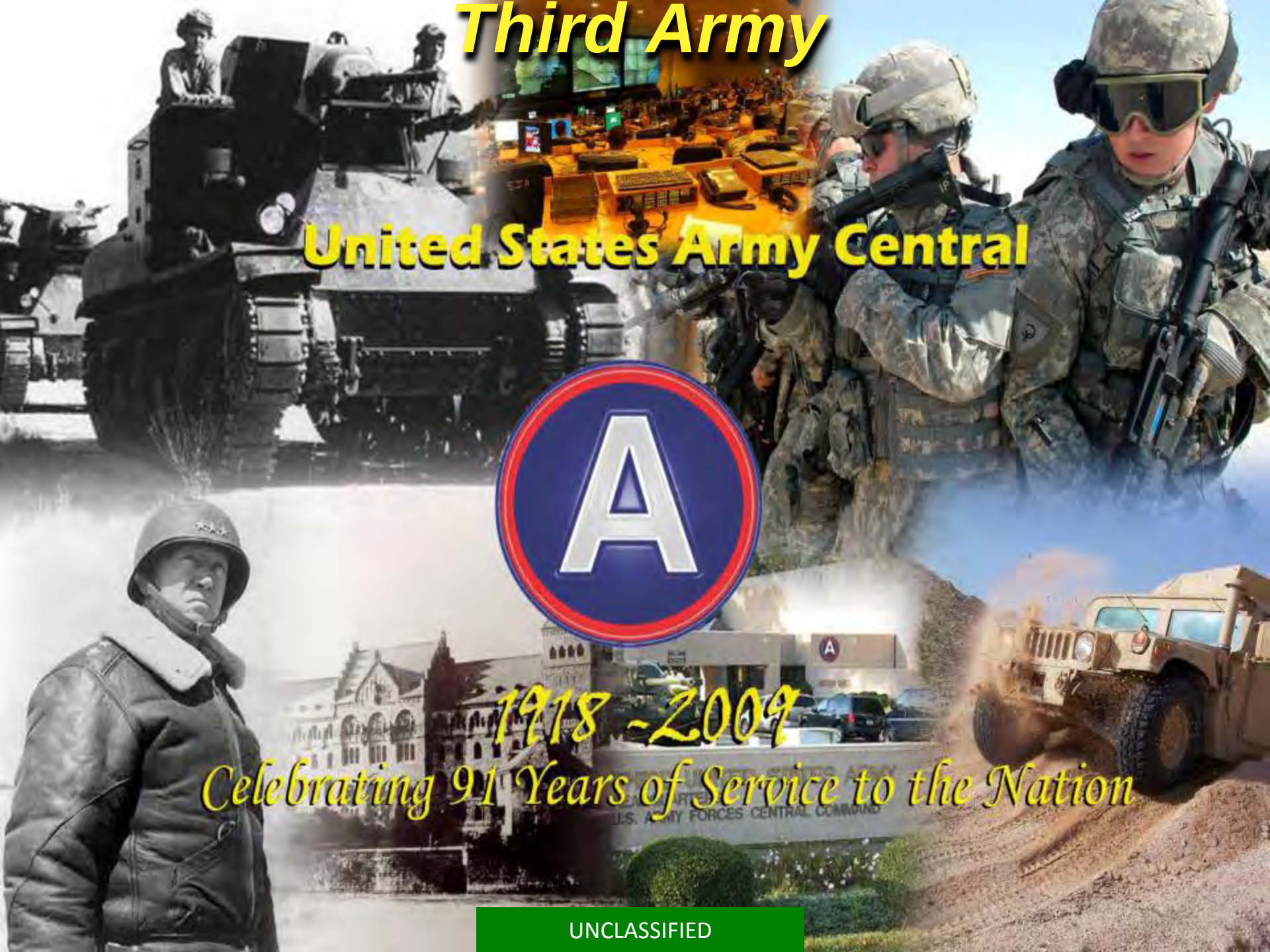
Guiding Principles

FIED

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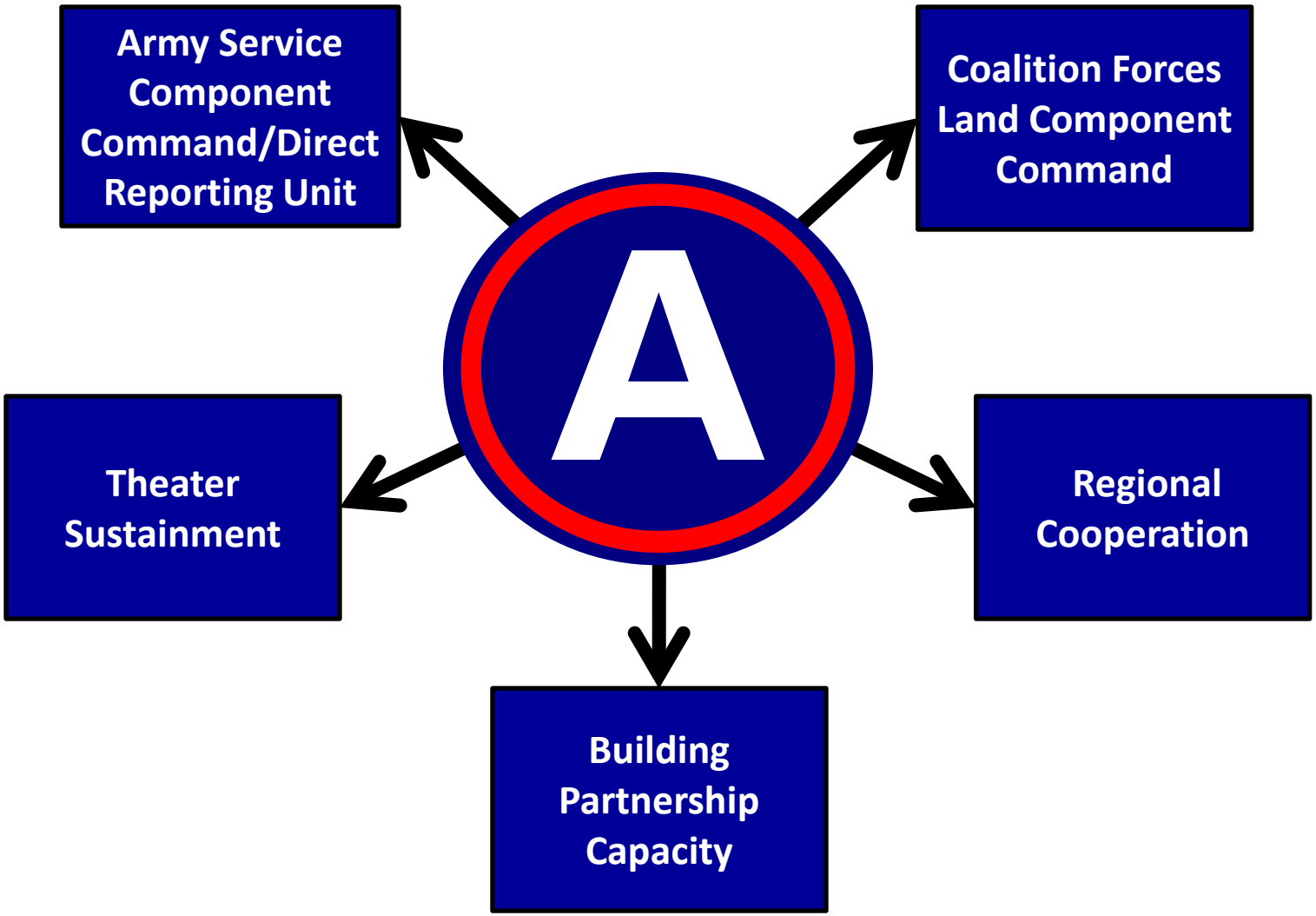
Summary

- New or expanded requirements include:
  - Field faster, more flexible CM response forces
  - Strengthen ability to conduct forensics and attribution
  - Enhance worldwide biological surveillance
  - Rapidly field defensive countermeasures
  - Organize a Standing JFHQ-E



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5 Things to Know About USARCENT



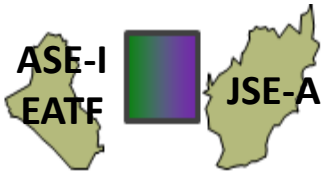
Main Command Post



Atlanta

Plans, Sets Strategic Conditions

- Plan and Conduct Theater Security Cooperation Activities
- Force Management
- Plan Joint/Coalition Exercises
- Contingency Planning
- Advise Gulf Nations on Army/Land issues
- Nominate Army Force Capabilities
- Strategic Concepts Development
- Program &Budget Requests, Execution
- Plan Theater Signal Architecture
- Equip the Force
- Morale Welfare Recreation
- Inspector General Oversight
- Detainee Operations Oversight



- Manning/Equipping
- Redeployment
- Retrograde
- Contracting/Funding
- Request for forces & equipment
- Reception/Staging/onward-movement & Integration
- Base Closure Ops

Enabling Commands, Joint, Coalition, National and Strategic Partners

Forward Command Post



Command & Control, Assess, Execute

- Maintain Joint Capability
- Execute Ground Operations
- Execute Logistics
- Assess threat and theater conditions
- Air Missile Defense-shared early warning
- Strategic/Operational Movements
- Information Management
- Financial Management
- Equipping /Resourcing
- Engineer – Combat, Construction
- Current and Future Operations
- Contracting

CCP

Integrate, synchronize, and coordinate processes and resources to achieve campaign objectives

Points of Contact



COL Jeff Brodeur 404.464.3913

jeffrey.brodeur@arcent.army.mil

SGM Tony Marshall 404.464.2442

tony.marshall@arcent.army.mil

Chemical and Biological Defense Science & Technology

Mr. John Connell

23 JUN 2010

DTRA's Key Mission Areas

- Nunn-Lugar Global Cooperation Initiative
- Arms Control and Verification
- **Chemical & Biological Defense**
- Consequence Management
- Nuclear Deterrence and Defense
- Nuclear Detection and Forensics
- Reachback

Technical Landscape

Medical S&T

- Pretreatments
- Therapeutics
- Diagnostics
- Threat agent science






Physical S&T

- Detection
- Protection (individual and collective)
- Hazard mitigation
- Integration and demonstration of advanced technologies






Information S&T

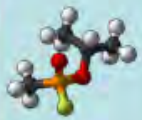
- Modeling and simulation
- Situational awareness
- Fate transport and dispersion
- Medical surveillance
- Data fusion
- Medical effects modeling
- Systems biology
- Bioinformatics





Basic / Supporting Research

- Physical chemistry
- Molecular design
- Phenomenology of biological agents
- In-silica modeling
- Mathematical recognition
- Bio-agent pathways
- Chem-agent mechanisms






Strategic S&T Themes

Provide an integrated capability to eliminate CB hazards as a threat to the Warfighter and the Nation

Seek the best science wherever it is

Deliver the best chem/bio technology for the warfighter and beyond



Optimize defense capabilities through partnership

Transition science to defeat asymmetric threats

Summary

- DTRA is engaged across the total spectrum of combating WMD
  - to include leading the development of next-generation CB defense technologies
- We work with phenomenal scientists and engineers in military laboratories, academic institutions and industry
  - to ensure that the best and most promising technologies are brought forward for further development by the JPEO into products that enable warfighter capabilities
- We'd like to hear from you about where you think technology might be able to enable future capabilities

Defense Threat Reduction Agency and US Strategic Command Center for Combating WMD Overview Briefing

23 June 2010

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Countering WMD - National Priority

- Proliferation of WMD and means of delivery is an existential threat
- WMD terrorism poses a ubiquitous danger
- The use of WMD would result in immense and enduring economic, political, & social damage
- The threat is immediate, growing, and evolving

"… [T]raditional dilemmas posed by rising, resurgent, or rogue nation states coexist with a range of diverse, unconventional threats that transcend national borders. … terrorist networks harnessing new technologies; weapons proliferation; environmental degradation; drug and human trafficking; cyber security; climate change; economic turmoil in the global markets; and the emergence of deadly and contagious diseases that can spread more rapidly than ever before in human history."

Secretary of Defense Robert M. Gates, May 30, 2009

DTRA/SCC Evolution

DTRA evolved from the WWII "Manhattan Project"

1942

Arms Control

Cooperative Threat Reduction

Nuclear Weapons Expertise

Combat Support

Combating WMD

Synchronizing CWMD Plans and Advocating Capabilities

DSWA

NBC Programs

1998

2006

Chemical and Biological Defense

DTRA's Mission

To safeguard the US and its Allies from Weapons of Mass Destruction (Chemical, Biological, Radiological, and Nuclear) and High Yield Explosives by providing capabilities to reduce, eliminate and counter the threat and mitigate its effects

Chemical



Biological



Radiological



Nuclear



High-Yield Explosives



SCC-WMD's Mission

- SCC-WMD supports USSTRATCOM by:
  - Synchronizing DoD CWMD planning and integration activities with those of the USG
  - Identifying CWMD capability needs
  - Advocating for CWMD capabilities
- SCC-WMD leverages DTRA expertise, tools, and capabilities
- DTRA leverages SCC-WMD activity to improve its support to Combatant Commanders



Planning Support to Proliferation Security Initiative Maritime Interdiction Exercise

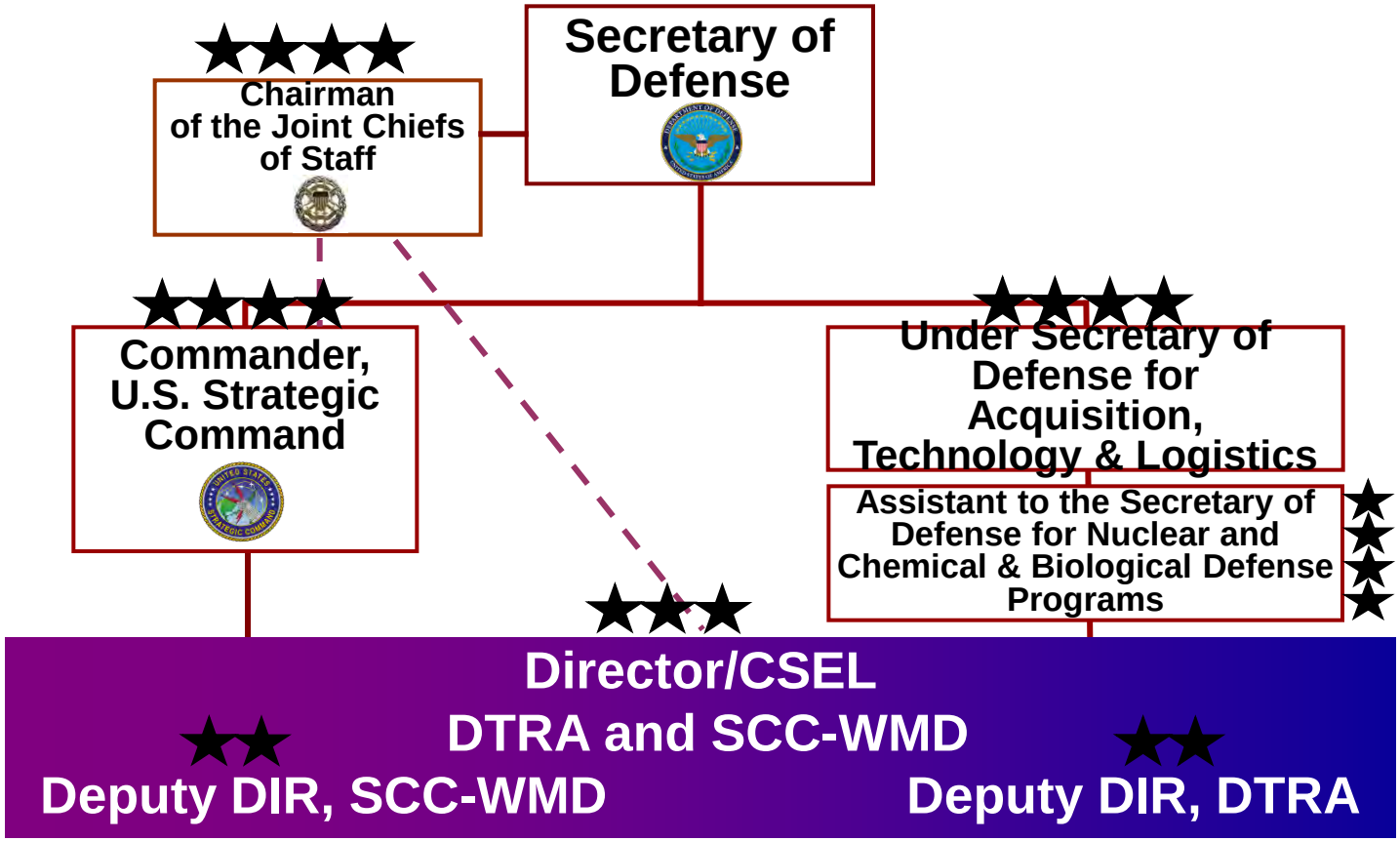


Interdiction Support



Joint Elimination Coordination Element (JECE)

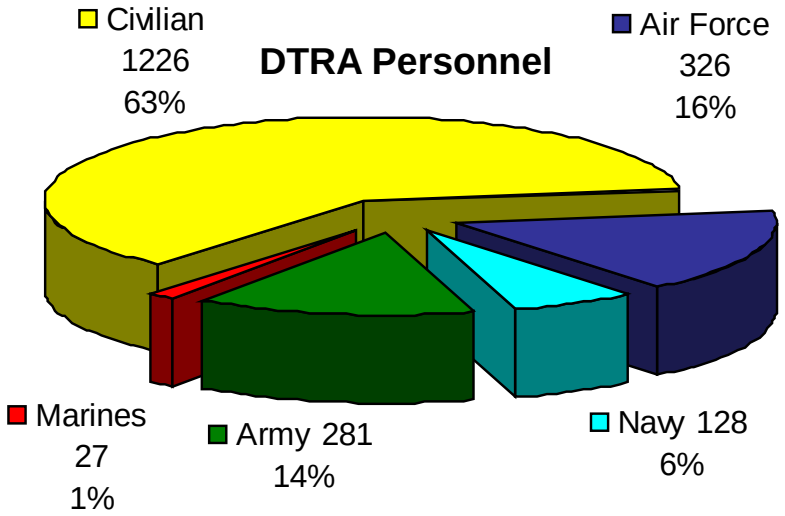
Command Structure



DTRA & SCC-WMD Authorization and Budget

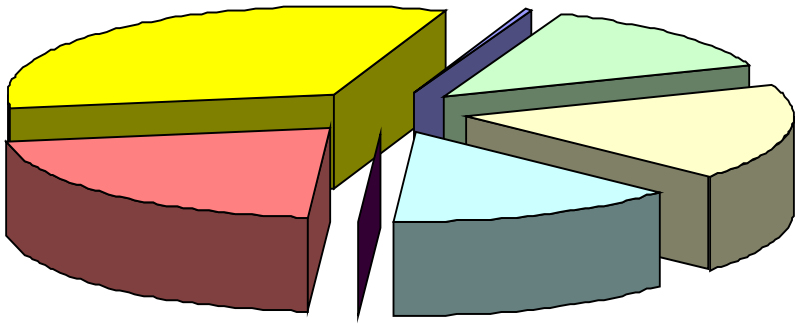
Total DTRA Authorizations: 1,988
(762 Military & 1226 Civilian)

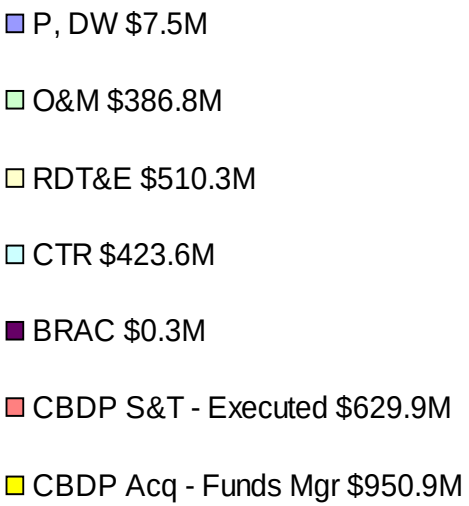
Total SCC-WMD Authorizations: 42
(32 Military & 10 Civilian)



Total Portfolio $2.9B

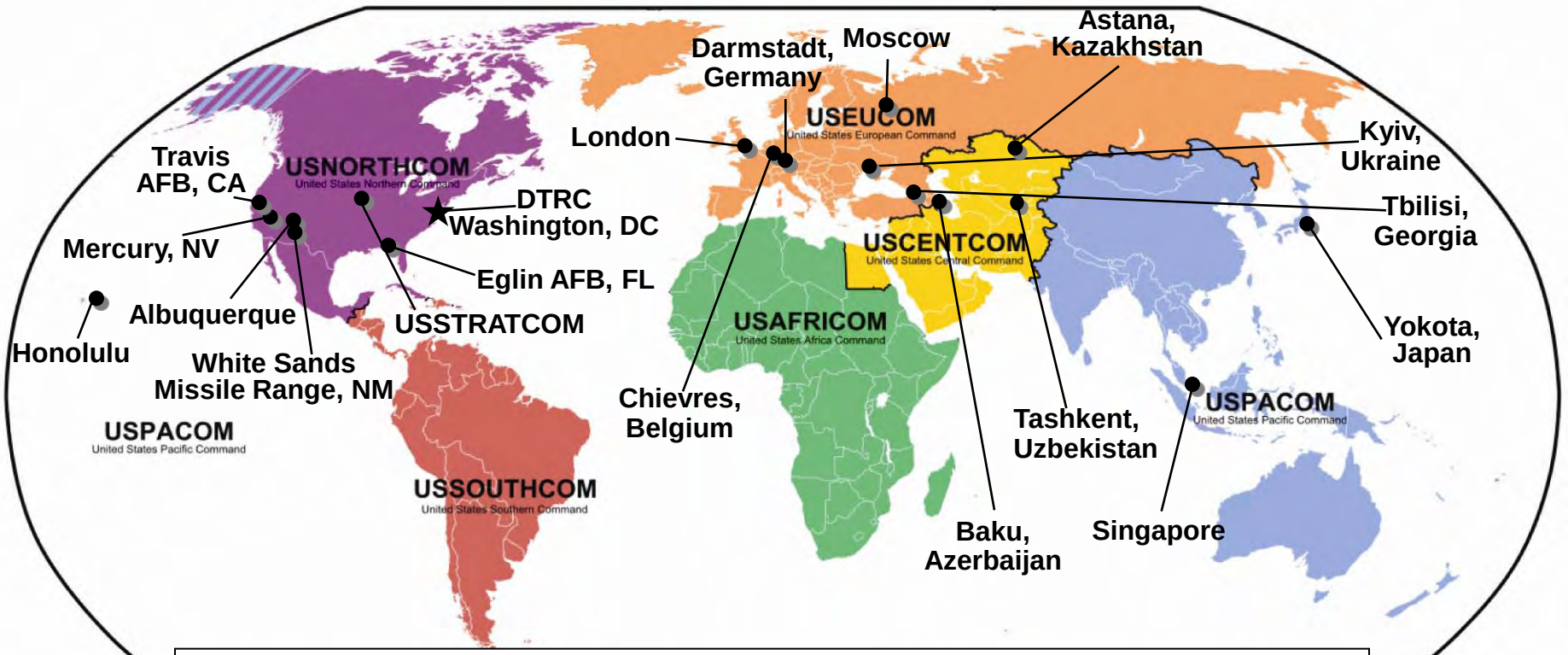
DTRA Budget





* Data as of FY2011 President's Budget for FY2010/Dollars do not include $51.3M reimbursable request

Our Mission Requires Global Execution and Global Presence



- DTRC and SCC-WMD at Fort Belvoir, VA
- 29% of DTRA people located outside National Capital Region
- Liaisons at all COCOMs, USFK, Joint Staff, National Guard Bureau, & FBI
- Treaty Escort Teams at chemical demil sites in AL, AR, OR and UT
- More than 100 DTRA personnel deployed overseas on a typical day

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DTRA/SCC-WMD Fulfill a Unique and Central Role in the National C-WMD Effort

National Countering-WMD (C-WMD) Mission Scope

Nonproliferation | **Counterproliferation** | **Consequence Management**

DTRA provides C-WMD expertise and support at strategic (global and national), operational (theater), & tactical (battlefield) levels through:

- Cooperative threat reduction and international engagement
- Planning, readiness, and operational support
- Research and development
- Integration of technology with tactics, techniques, and procedures

… In collaboration with interagency and international partners

… Across the full scope of the C-WMD mission: nonproliferation, counterproliferation, and consequence management

… Against chemical, biological, radiological, nuclear, and high yield explosive threats

Nonproliferation - Missions



Missile Submarine Elimination

ICBM Elimination



Nonproliferation





395 Arms Control Treaty Inspections



Improved Border Security in Ukraine



Azerbaijan Bio Central Reference Lab

Counterproliferation - Missions

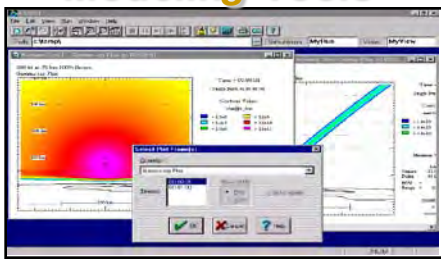
JDAM with Thermobaric Warhead





Tunnel Defeat Tests

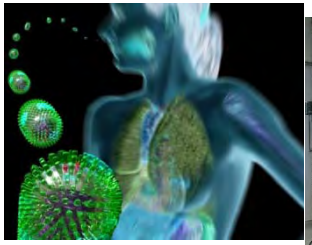
Modeling Tools





SCC-WMD - PSI Exercise Support to Combatant Commanders

Counterproliferation





Transformational Medical Technologies Initiative and H1N1

Improved Nuclear Search



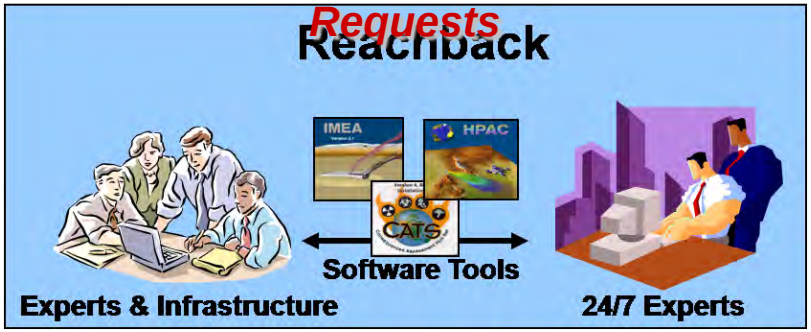




CBRN Unmanned Ground Vehicle

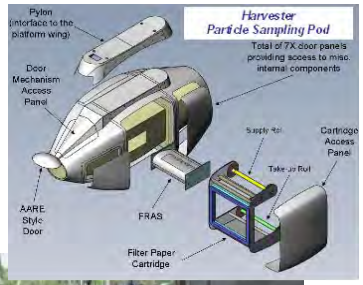
Consequence Management - Missions

Over 1000 Technical Reachback Requests



Consequence Management

Assistance to Civil Support Teams



Post-Nuclear Detonation Forensics









Foreign Consequence Management

Nuclear Support Missions



Defense Threat Reduction University

Nuclear Weapon Stockpile Support and Accountability



Nonproliferation | **Counterproliferation** | **Consequence Management**

Defense Nuclear Surety Inspections





Nuclear Weapon Accident, Incident, Recapture, and Recovery Exercise Support



Nuclear Weapon Safety against Lightning Strikes

Nunn-Lugar DoD Cooperative Threat Reduction …

- Performed in the Former Soviet Union and Albania
- Major objectives:
  - Assist other nations to meet their treaty obligations
  - Dismantle WMD and associated infrastructure
  - Consolidate and secure WMD, related technology, and materials
  - Increase transparency and encourage higher standards of conduct
  - Build foreign partnerships and collaboration

Caspian Sea Surveillance



Strategic Delivery System Elimination



Russian Chemical Weapons Destruction Facility



Nuclear Weapons Storage Security



Cooperative Biological Research



Monitoring, Consolidating, and Securing Extremely Dangerous Pathogens



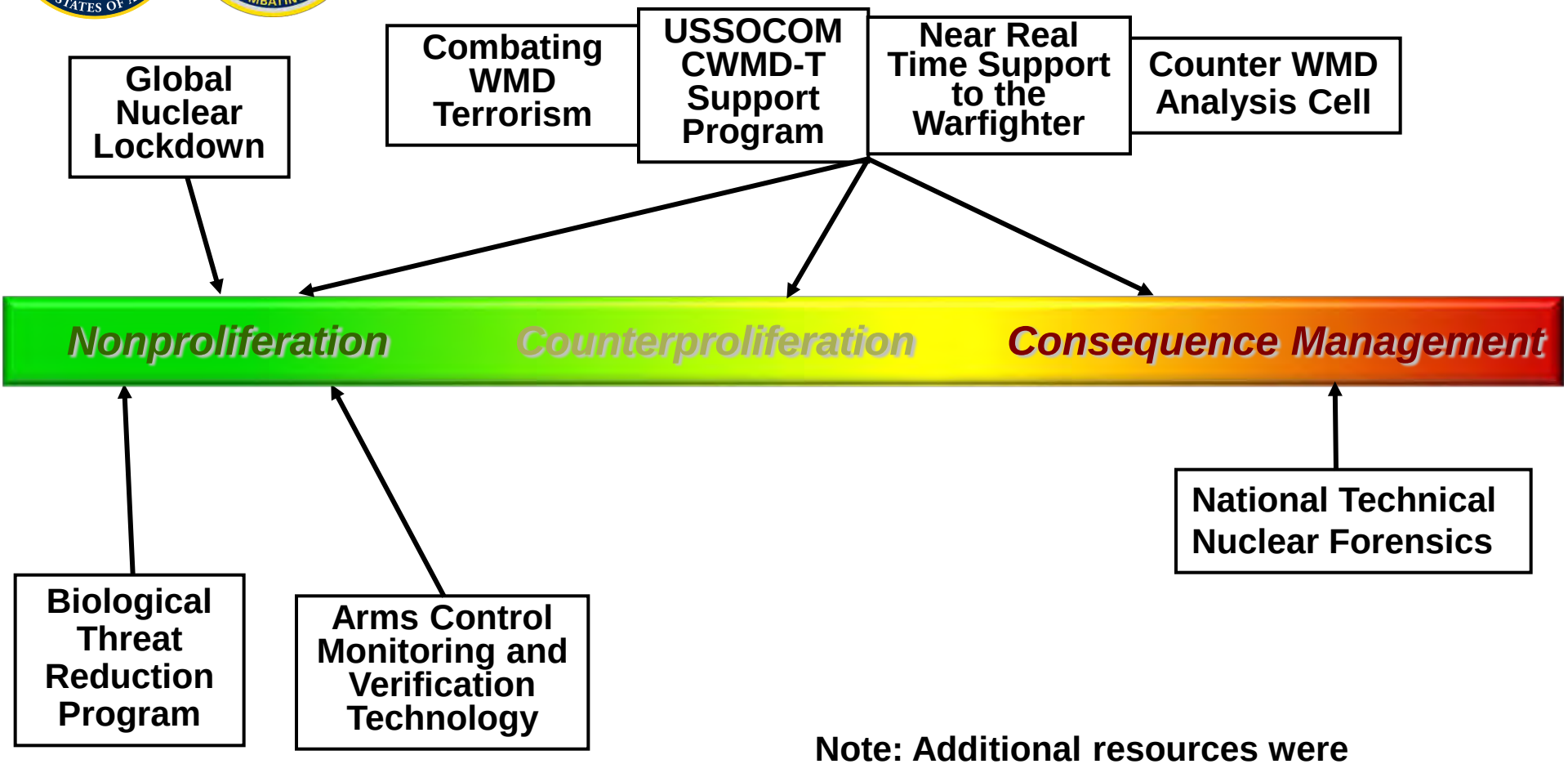
Nunn-Lugar Global Cooperation: The New DTRA Model for Security Engagement

- DTRA support to and participation in WMD-focused global security engagement
- Agile, flexible, anticipatory, and responsive programs and activities
- Integration of CTR, arms control, multilateral/bilateral threat reduction and engagement programs, global situational awareness, and collaborative R&D
- Conducted through growing interagency and international partnerships
- Expanded support to Combatant Commands' Theater Security Engagement

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DTRA's FY11 Budget Request Will Accelerate C-WMD Capability Delivery



Note: Additional resources were provided for support to the Nuclear Deterrent in FY09 and FY10.

Conclusion

- Countering WMD threats is a national priority
- DTRA and SCC-WMD fulfill a unique and central role in the effort
  - C-WMD expertise at strategic, operational, and tactical levels
  - Nonproliferation, counter-proliferation, and consequence management
  - Planning, readiness and operational support
  - Research and development
  - Integration technology with tactics, techniques, and procedures
- We team with interagency and international partners
- Our mission requires global execution and global presence
- Nunn-Lugar Global Cooperation is the new DTRA model for security engagement

Making the world safer...



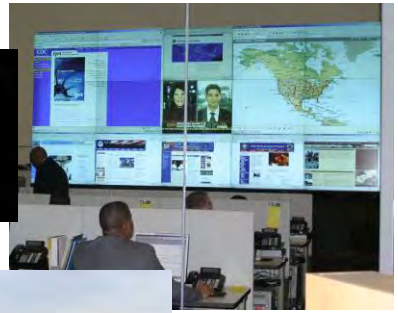


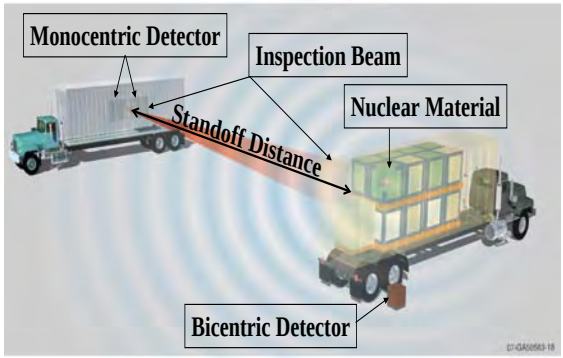






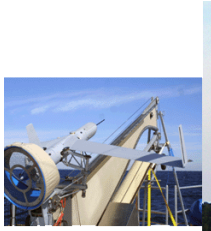
















...by countering weapons of mass destruction

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2010 International Symposium on Spectral Sensing Research

Dr. James O. Jensen
Co-Chair of the Steering Committee
2010 ISSSR
Research and Technology Directorate
U.S. Army Edgewood Chemical Biological Center

2010 ISSSR Mission

The 2010 International Symposium on Spectral Sensing Research (2010 ISSSR) will continue a longstanding tradition of conducting a bi-annual science and engineering event for the purpose of advancing the state-of-the-art in spectroscopic-based sensing science and electronic technology capabilities. Here, one of the primary strategies is the creation of new technology-program oriented networks that serve to accelerate the key research and development efforts that underpin the leading spectroscopic-based early-warning sensor capabilities.

- **First ISSSR was held in 1992**
- **ISSSR held roughly every two years**
- **2010 ISSSR will be the tenth meeting**

Locations and Dates

- **1992:** Maui, Hawaii, 15-20 November 1992
- **1994:** San Diego, California, 10-15 July 1994
- **1995:** Melbourne, Australia, 26 November to 1 December 1995
- **1997:** San Diego, California, 14-19 December 1997
- **1999:** Las Vegas, Nevada, 31 October to 4 November 1999
- **2001:** Quebec City, Canada, 10-15 June 2001
- **2003:** Santa Barbara, California, 2-6 June 2003
- **2006:** Bar Harbor, Maine, 29 May to 2 June 2006
- **2008:** Hoboken, New Jersey, 23-27 June 2008
- **2010:** Springfield, Missouri, 21-24 June 2010

Conference Themes

- **1992:** High Resolution Spectral Sensing of the Environment
- **1994:** Dual-Use Technology
- **1995:** Crisis Support
- **1997:** Observation to Information
- **1999:** Systems and Sensors for the New Millennium
- **2001:** Sensing from Space
- **2003**: Sensing from Land, Sea, Air, and Space
- **2006:** Rapidly Advancing Spectroscopic (DC to X-ray) Sensing Science and Technology Base for enabling “reagentless” Early-Warning Monitoring of Chemical, Biological and Radiological contamination in Water, on Surfaces and within Air.
- **2008:** Spectroscopic Sensing Science & Electronic Technology with a Special Emphasis on Enhancement Algorithms for Land, Sea and Air Threat-Agent Detection
- **2010:** Bridging the Gap from Emerging Technology to the Warfighter

- From 1992 to 2003 the ISSSR was a Multi-agency Government Conference on Spectral Sensing

- 2006 to 2010 ISSSR held jointly with University Support
  - 2006 University of Maine
  - 2008 Stevens Institute of Technology
  - 2010 Missouri State University (Jordan Valley Innovation Center)

ISSSR Agenda

First Three Days of the ISSSR will be held at the University Plaza Hotel & Convention Center, the Jordan Valley Innovation Center (JVIC) and Missouri State University (MSU)) and incorporate the following basic agenda from June 21-23:

First Day: Major CBRNE Challenges and Promising S&T Opportunities

Second Day: Science & Technology for Land, Sea & Air Applications

Third Day: Frontier & Emerging Spectroscopic Science & Technology

A Special Session of the 2010 ISSSR will be held at Fort Leonard Wood on June 24. This session will include examples of research and development efforts that are "bridging the gap from emerging technology to the warfighter."

Fourth Day: Emerging Technology for the Warfighter

Time Schedule	Emerging Technology for the Warfighter
08:50 – 10:30	Morning Plenary @ USO Building, Fort Leonard Wood
08:50	Introduction: Dr. James Jensen, U.S. Army Edgewood Chemical Biological Center
09:00	Elliott Brown Physical Domains, LLC
09:30	Shubhra Gangopadhyay University of Missouri-Columbia
10:00	Jan Halamek Clarkson University
10:30 – 12:00	Free Time – Exhibit Viewing
12:00 – 13:00	Lunch @ USO Building
13:00-14:30	Afternoon Plenary @ Abrams Theater, Fort Leonard Wood
13:00	Jean-Marc Theriault Defence R&D Canada-Valcartier
13:30	William Marinelli Physical Sciences, Inc.
14:00	Ani Weling Foster Miller
15:45	Bus leaves for Springfield (passengers should board at 15:30)
17:30	Arrive University Plaza Hotel, Springfield – End of Conference

Thurs June 24	**Location: USO Bldg FORT LEONARD WOOD**
	Plenary I
	Chair: James Jensen, *U.S. Army ECBC*
8:50-9:00	INTRODUCTION
	James Jensen, *U.S. Army ECBC*
9:00-9:30	TRACKING CHEMICAL THREATS AT MACH SPEEDS: THE CHALLENGE OF DETECTING BULLETS IN FLIGHT
	Elliot Brown, *Physical Domains, LLC*
9:30-10:00	MOLECULARLY IMPRINTED POLYMER MICROSPHERES LABELED WITH QUANTUM DOTS FOR DETECTION OF NITROAROMATIC EXPLOSIVES
	Shubhra Gangopadhyay, *University of Missouri-Columbia*
10:00-10:30	FIELD HOSPITAL ON A CHIP: DEVELOPMENT OF BIO-LOGIC BASED ENZYMATIC ARCHITECTURES FOR “SENSE AND THREAT” OF BATTLEFIELD INJURIES
	Jan Halamek, *Clarkson University*

Thurs June 24	Location: Abrams Theater FORT LEONARD WOOD
	Plenary II
	Chair: James Jensen, *U.S. Army ECBC*
13:00-13:30	REAL-TIME PASSIVE STANDOFF CHEMICAL DETECTION WITH CATSI EDM: SYSTEM DESCRIPTION AND TEST RESULTS
	Jean-Marc Theriault, *Defence R&D Canada-Valcartier*
13:30-14:00	AIRIS STANDOFF MULTISPECTRAL SENSOR FOR THE DETECTION OF VAPOR AND SURFACE CONTAMINATION
	William Marinelli, *Physical Sciences, Inc.*
14:00-14:30	INFRARED BIO-AEROSOL THREAT ALERT (IBATA) SYSTEM
	Ani Weling, *Foster Miller*

Special Thanks to

Mr. Barrett Parker
Conference Chair of ISSSR 2010
Technical Director
Joint CBRN Combat Developers
U.S. Army Maneuver Support Center (MANSCEN)
Fort Leonard Wood

- Keynote Speaker in ISSSR 2006 at Bar Harbor, ME
- Suggested that the ISSSR 2010 be part of CBRN(2010) at Ft. Leonard Wood
- Coordinated organizing efforts of CBRN and ISSSR

Special Thanks to

LTC Christopher Chesney
U.S. Army CBRN School, Chief of Staff
Fort Leonard Wood

Mr. Russell Gehrlein
U.S. Army CBRN School, Operations Officer
Fort Leonard Wood

Goals of the 2010 ISSSR

• Advance scientific research in the state of Missouri and elsewhere.

• Bridge the gap between scientists and developers in support of the warfighter, particularly in the area of chemical and biological defense.

• Highlight Innovation Science & Technology Partnerships for Meeting the Needs of Future Warfighters.

• Advance Spectral Sensing (reagentless sensing)

NDIA
National Defense Industrial Association

PROMOTING NATIONAL SECURITY SINCE 1919

2010 JOINT CBRN CONFERENCE & EXHIBITION

"Shaping the Combating-WMD Enterprise"



Attend the largest annual gathering of government and CBRN exhibitors

Hear key speakers highlight issues and trends in Homeland Defense and the DoD CBRN Defense Program

Observe demonstrations of the latest in CBRN equipment and technologies

Network with government and industry leaders in the CBRN defense arena

FORT LEONARD WOOD, MISSOURI

JUNE 22-24, 2010

WWW.NDIA.ORG/MEETINGS/0300

EVENT #0300

Meeting POC:
Julie Veldkamp
Meeting Planner
703-247-2577
jveldkamp@ndia.org

Exhibits POC:
Luellen Hoffman
Director of Exhibits
703-247-9460
lhoffman@ndia.org

For the most up-to-date conference information, please visit:

www.ndia.org/meetings/0300

For the most up-to-date exhibits information, please visit:

www.ndia.org/exhibits/0300

WHY YOU SHOULD ATTEND:

- The potential for use of CBRN weapons by rogue nations or terrorist organizations, at home or abroad, remains as strong as ever. To ensure readiness for such an event, the CBRN community stakeholders – including uniformed and civilian employees of all the Services and other government agencies, international partners, defense industry contractors and concerned academia – come together to share information about the threat, our capability to deal with it, and our future CBRN defense requirements.
- Selected speakers will discuss current issues and trends, and provide insights and perspective. The first day will focus on CBRN consequence management for Homeland Defense. The second day will focus on the Joint CBRN missions that stem from DoD CBRN Defense Program.
- This exhibition will showcase the vast array of CBRN defense capability provided by both government and supporting industry. Indoor exhibits will be housed in a climate-controlled pavilion. Outdoor exhibits will be conveniently located between Baker Theater and the exhibits pavilion.
- Both government and industry exhibitors will have an opportunity to participate in selected demonstrations of CBRN defense equipment and technologies.
- This assembly of CBRN sector leaders, industry partners and other stakeholders will offer unparalleled networking opportunity.

CONFERENCE OBJECTIVE:

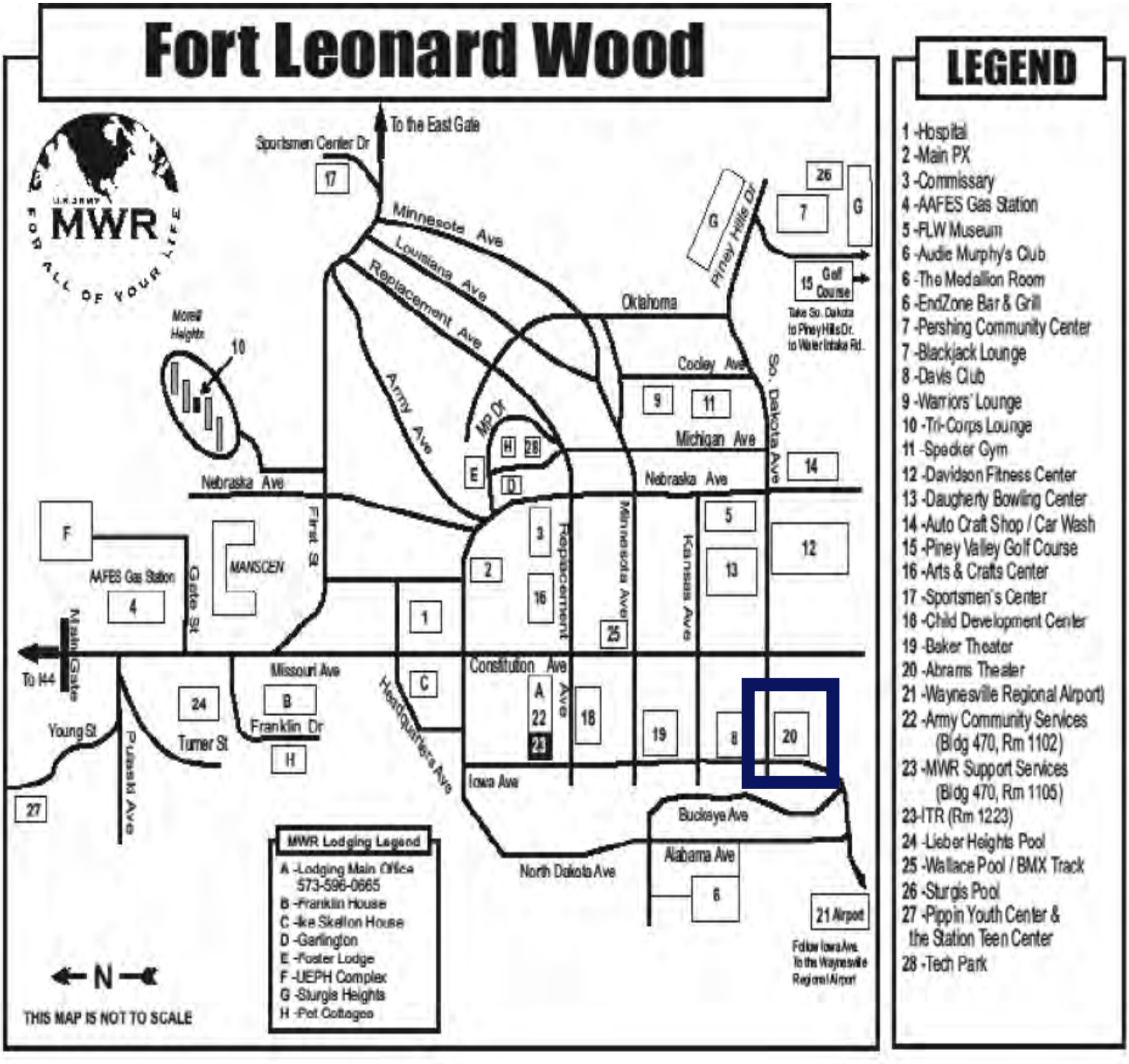
The 2010 Joint CBRN Conference and Exhibition will provide a forum for the exchange of CBRN defense information among warfighters, CBRN incident responders, technology developers, acquisition professionals and the supporting industry. This exchange will focus on a better understanding and increased responsiveness to CBRN defense users' needs. Selected speakers from CBRN defense stakeholder organizations will discuss current issues and future direction. The exhibition will showcase the broad array of CBRN defense equipment and technologies, as well as the latest in training and logistics capabilities.

PARKING & GROUND TRANSPORTATION

The meeting will take place at Fort Leonard Wood, MO. Fort Leonard Wood is located approximately 130 miles west of St. Louis, MO and approximately 80 miles east of Springfield, MO on I-44. There is limited parking on the post, so please consider carpooling. Please enter through main gates.

HOTEL INFORMATION

THERE IS NO ROOM BLOCK FOR THIS MEETING.
Due to the increase in student population at Fort Leonard Wood, lodging on-post is limited. Attendees should make their own lodging reservations. To find lodging in the area, please visit the Pulaski County Tourism Bureau web site:
http://www.visitpulaskicounty.org/





TUESDAY JUNE 22, 2010

4:00 PM - 7:00 PM — REGISTRATION / EXHIBITS OPEN
Exhibits Tent

5:00 PM - 6:00 PM — WELCOME RECEPTION
Exhibits Tent

WEDNESDAY JUNE 23, 2010

7:30 AM - 9:00 AM — REGISTRATION & CONTINENTAL BREAKFAST
Exhibits Tent

7:30 AM - 6:30 PM — EXHIBITS OPEN
Exhibits Tent

9:00 AM - 9:15 AM — OPENING COMMENTS
Abrams Theater

NDIA Welcome
BG Dean Ertwine, USA (Ret)
Chairman,
CBRN Division, NDIA

Fort Leonard Wood Welcome
MG David Quantock, USA
Commanding General,
US Army Maneuver Support Center

Chief of Chemical Welcome
BG Les Smith, USA
Commandant,
US Army CBRN School

9:30 AM - 11:30 AM — KEYNOTE ADDRESS
Abrams Theater

Ms. Rebecca K. C. Hersman
Deputy Assistant Secretary of Defense
for Countering Weapons of Mass Destruction
OSD Policy (GSA)

CONTINUED

Dr. Kenneth Meyers
Director, Defense Threat Reduction Agency

MG Frank Glass, USA (Invited)
Director of Operations, USNORTHCOM

11:30 AM - 1:30 PM — LUNCH
Exhibits Tent

1:30 PM - 4:00 AM — COMBATING-WMD ENTERPRISE PANEL

MODERATOR

COL Tom Woloszyn, USA
Mil. Asst, DASD, CBD/CM

PANEL

COL Mike O'Keefe, USA
Acting Director, JSTO, DTRA
BG Jess Scarbrough, USA
JPEO-CBD
Mr. Joseph Wienand
Acting Director, ECBC (Invited)
COL William Barnett, USA
Director, JRO
Mr. James Cooke
Deputy Director, JT&E
Mr. Ray Van Pelt
CBRNE Advisor, 20th SUPCOM (CBRNE)
BG Leslie Smith, USA
Commandant, USACBRNS

4:00 PM - 4:15 PM — INDUSTRY SUPPORT: CHEM BIO ACQUISITION INITIATIVES UPDATE
Dr. John Wade
Chairman, CBDAIF

4:15 PM - 4:30 PM — TECHNOLOGY SUPPORTING THE COMBATING: WMD ENTERPRISE: ISSSR
Dr. James Jensen
Co-Chairman, ISSSR

4:00 PM - 5:00 PM — OUTDOOR EXHIBITS OPEN
Outside of Exhibits Tent

5:00 PM - 6:30 PM — NDIA RECEPTION
Exhibits Tent



SPONSORSHIP OPPORTUNITIES

Many of the NDIA events offer category - exclusive sponsorships to fit your budget. By enhancing your brand with a sponsorship at our events, you'll build a stronger perception from the audience, and stand out from the crowd. To receive more information please contact:

Luellen Hoffman
Exhibits & Sponsorships
Director (703) 247-9460
lhoffman@ndia.org



THURSDAY JUNE 24, 2010

7:30 AM - 9:00 AM — REGISTRATION & CONTINENTAL BREAKFAST
Exhibits Tent

7:30 AM - 3:30 PM — EXHIBITS OPEN
Exhibits Tent

9:00 AM - 9:10 AM — OPENING COMMENTS
Abrams Theater

BG Dean Ertwine, USA (Ret)
Chairman, CBRN Division, NDIA

9:00 AM - 10:00 AM — KEYNOTE ADDRESS
Abrams Theater

Mr. Dave Lavers
Director, CBRN Directorate
Joint Capability Coordination Division,
Australian Army

CONTINUED



10:00 AM -11:45 AM — COMBATING- WMD WARFIGHTER PANEL

MODERATOR

BG Leslie Smith, USA
Commandant, USACBRNS

PANEL

COL Tom Carledge, USA
Chief of Staff, 20th SUPCOM (CBRNE)
COL Eric brigham, USA
Commander, 48th Chemical Brigade
TBD
4th MEB (CCMRF BDE)
Col. Pollock, USMC
Commander, CBIRF (Invited)
COL Jeff Brodeur, USA
CBRN Officer, ARCENT
COL Bruce Foreman, USA
CBRN Officer, I Corps (Invited)
COL William King, USA
Commander, Dugway Proving Ground
CSM Ted Lopez, USA
Regimental CSM, USACBRNS
SGM Luis Rivera, USA
CBRN SGM, USARPAC

11:45 AM - 12:00 PM — ADMINISTRATIVE COMMENTS

BG Dean Ertwine, USA (Ret)
Chairman, CBRN Division, NDIA

11:45 AM - 1:30 PM — LUNCH
Exhibits Tent

1:00 PM - 3:30 PM — ISSSR PRESENTATIONS: BRIDGING THE GAP FROM EMERGING TECHNOLOGY TO THE WARFIGHTER
Abrams Theater

1:00 PM - 3:30 PM — OUTDOOR DEMONSTRATIONS
Outside Exhibit Tent

4:00 PM - 5:00 PM — CHEMICAL CORPS REGIMENTAL HALL OF FAME INDUCTION CEREMONY
Abrams Theater

EXHIBITS INFORMATION

EXHIBIT RATE INCLUDES:

Networking social functions in the exhibit areas

Two complimentary full conference registrations per 100 square feet.

Conference attendee list (to be emailed after the show)

Standard booth package of:
- Side and back drape and company sign
- No booth furnishings are included
- Outdoor spaces include the space only
- Company Profile on-line
- 24-hour security
- Carpet is required and exhibit tent is not carpeted

EXHIBIT PERSONNEL REGISTRATION:

For each exhibit space that your organization occupies at the 2010 Joint CBRN Conference and Exhibition, your organization will be entitled to two complimentary full-conference registrations which do account for your booth personnel. These complimentary registrations will allow admittance to all conference and exhibition events, including receptions, meal functions,and sessions.

Complimentary registrations must be assigned online before June 14, 2010. After your allotment of two registrations per 100 square feet for indoor space or one badge per 100 sq ft for outdoor space is filled, you must register all additional personnel as conference attendees, at attendee rates.

To register additional personnel, go to www.ndia.org/meetings/0300

If you have any questions please contact Luellen Hoffman, Director of Exhibits at lhoffman@ndia.org or (703) 247-9460

Exhibits Tent

All of the indoor exhibits will be housed in the Exhibits Tent, a climate controlled, clear-span tent. There are 2 exhibitor badges allocated for each 100 sq ft of indoor space.

Outdoor Exhibits

Outdoor space will be sold in 20x20 spaces or larger. Exhibitors must contact Luellen Hoffman, Director of Exhibits at 703-247-9460 to purchase ALL outdoor spaces. Please note for 2010 there is only 1 exhibitor badge allocated for each 100 sq ft of outdoor space. A 20x20 space will give you 4 badges. The outdoor space will **not** have an overhead covering nor flooring and will be subject to outdoor elements.

Cost to Exhibit:

NDIA Corporate Members*:
$23.00/sq. ft.
*rate also applies to government agencies & academic universities

Non-member:
$28.00/sq. ft.

Outdoor Displays:

NDIA Corporate Members*:
$5.00/sq. ft.
*rate applies to government agencies & academic universities

Non-member:
$9.00/sq. ft.

Membership Discount:
$500 per 10x10 booth

To qualify for the Corporate member discount rate on booths, your company needs to be an NDIA Corporate Member first.

Remember:

Indoor booths are sold in increments of 10x10 sq. ft. or multiples thereof.

Please note NDIA does not charge extra fees for corners or islands.

No 'end cap' booths are permitted and floor covering (carpet) is required.

View Exhibits Only Hours

VEO - FREE PASS

Wednesday, June 23, 2010:
7:30am - 4:00pm

Thursday, June 24, 2010:
7:30am - 1:30pm

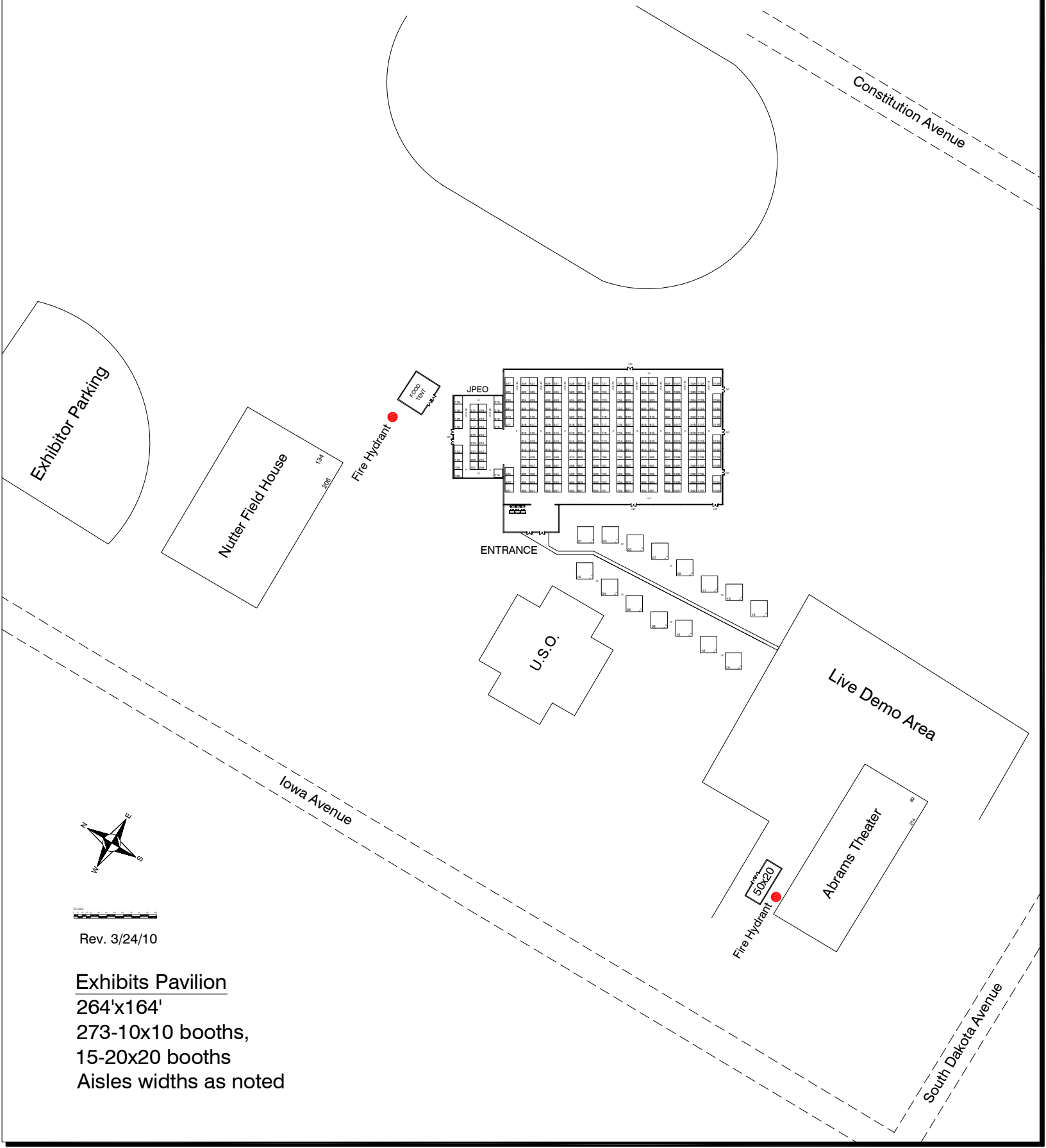
EXHIBITS INFORMATION

EXHIBITOR LIST

(AS OF 4/7/2010)

AdVnt Biotechnologies	708a
Ahura Scientific, Inc.	624a
Alluviam LLC	608a
AristaTek	727a
Battelle	924a
Bruker Detection Corporation	612a
Camber Corporation	617
CBI Polymers	1008a
CBRNe World	628a
CBRNIAC	302
CCRA	1103a
Climatronics Corporation	723a
Cobra Software / Defense Group	401a
Concurrent Technologies Corporation	1012
CRISTANINI S.p.A	602
DHS Technologies / Drash	513a
DRS Technologies	818a
DTRA / JSTO	418a
ENSCO, Inc.	717a
Environics USA	724a
Federal Resources	524
First Line Technology	305
General Dynamics Armament and Technical Products	607a
HDT Engineered Technologies	618a
ICx Technologies	908a
Idaho Technology, Inc.	507a
IEM	1017a
INFICON	410
InnovaPrep LLC	719a
Intelagard	713a
ITT Industries AES Div	402
Joint Research and Development, Inc.	828a
JPEO for Chem Bio Defense	207
JPEO for Chem Bio Defense	118
JPEO for Chem Bio Defense	106
JPEO for Chem Bio Defense	218
JPEO for Chem Bio Defense	317
Kappler Inc.	1107a
KD Analytical, Inc.	911a
KMI Media Group	1028a
L-3 Communications, Linkabit	812a
Lockheed Martin	923a
MacAulay-Brown, Inc	414
Microbial-Vac Systems Inc.	512
Morphix Technologies	726a
Northrop Grumman	807a
Nucsafe, Inc.	613a
Oak Ridge National Laboratory	1023a
OptiMetrics, Inc.	1018a
ORTEC	408a
Paul Boye Inc.	308a
Pine Bluff Arsenal	518a
Proengin Inc.	813a
QinetiQ North America	909a
QuickSilver Analytics, Inc.	728a
RAE Systems	712a
Raytheon - NCS	718a
Raytheon Technical Services	509
RSDecon - A Bracco Company	814a
SAIC	502
SAIC	3
Scott Health & Safety	823a
Signature Science, LLC	824a
SRC, Inc.	918a
STERIS Corporation	808a
Tactical & Survival Specialties, Inc.	304
Teledyne Brown Engineering	714a
Tex-Shield, Inc.	508a
The JGW Group	403a
The JGW Group	407
The JGW Group	412
The JGW Group	514a
The JGW Group	310
The JGW Group	409
The JGW Group	411
The JGW Group	413
Thermo Fisher Scientific RM&SI	623
TMTI	707a
TSI Incorporated	827a
Ultimate Survival Technologies	1002a
URS EG&G	809a
US Army Dugway Proving Ground	301
USAA	1024a
Utilis USA	7
W.L. Gore & Associates, Inc.	913

Joint CBRN Conference 2010
Exhibits Pavilion • June 22-24, 2010
Fort Leonard Wood, Missouri



Rev. 3/24/10

Exhibits Pavilion

264'x164'
273-10x10 booths,
15-20x20 booths
Aisles widths as noted

REGISTRATION

There are three ways to register:

ONLINE:

Please go to the following link to register online:
www.ndia.org/meetings/0300

FAX:

Register via fax by completing the Registration Form and faxing it to (703) 522-1885.

Please do not fax any registrations after June 7, 2010. After this date, please bring your registration form with you to the conference to register on-site or register online.

MAIL:

Registration forms may be mailed to:

NDIA Event # 0300
2111 Wilson Blvd.,
Suite 400
Arlington, VA 22201.

Please do not mail any registrations after June 7, 2010. After this date, please bring your registration form with you to register on-site or register online.

Registrations will not be taken over the phone. Payment must be made at the time of registration.

REGISTRATION FEES	EARLY (UNTIL 4/28)	REGULAR (4/28-6/07)	LATE (AFTER 6/07)
U.S. ACTIVE DUTY MILITARY	$90	$100	$110
GOVERNMENT/ ACADEMIA/ ALLIED GOV.	$395	$445	$495
INDUSTRY NDIA MEMBER	$495	$545	$615
INDUSTRY NON-NDIA MEMBER	$570	$625	$705

REGISTRATION & TRAVEL INFORMATION

ATTENTION ALLIED VISITORS

Due to the heightened security level on the installation of foreign regulatory requirements, an official foreign visit request must be submitted through appropriate channels or the accredited military attache assigned to your country's embassy in Washington, DC, and approved by Fort Leonard Wood before conference attendance. Please go to www.ndia.org/meetings/0300 to fill out the information form (PDF) and fax to Mr. Dale Chapman at Fort Leonard Wood at (573) 563-6112. If you require any assistance, please contact Mr. Dale Chapman at (573) 563-7363 or via e-mail at dale.chapman@us.army.mil.

SPECIAL NEEDS

NDIA supports the Americans with Disabilities Act of 1990. Attendees with Special Needs should contact Julie Veldkamp by June 7, 2010 via email: jveldkamp@ndia.org & please refer to the Joint CBRN conference.

CANCELATION POLICY
(For Conference Registration Only)

Cancellations before 06/07/10 receive a refund minus a $75 cancellation fee. No refunds for cancellations received after 06/07/10. Cancellations must be made in writing. Substitutions welcome in lieu of cancellations. Please e-mail your cancellations or substitutions to Julie Veldkamp at jveldkamp@ndia.org.

FOREIGN PAYMENT

NDIA does not accept purchase orders from foreign governments or industry and will not invoice them for payment. Fees must be paid by a credit card or check drawn from U.S. Banks in U.S. dollars or bank transfers.

CONFERENCE ATTIRE

The appropriate attire for the 2010 Joint CBRN conference is business casual or military uniform of the day.

EVENT #0300 ▸ NDIA REGISTRATION FORM

NATIONAL DEFENSE INDUSTRIAL ASSOCIATION ▸ 2111 WILSON BOULEVARD, SUITE 400 ▸ ARLINGTON, VA 22201-3061
(703) 522-1820 ▸ (703) 522-1885 FAX ▸ WWW.NDIA.ORG

JOINT CBRN CONFERENCE & EXHIBITION ▸ FORT LEONARD WOOD, MISSOURI
JUNE 22-24, 2010

3 WAYS TO SIGN UP:

1. **Online with a credit card at www.ndia.org/register/0300**
2. **By fax with a credit card - Fax: 514.228.3209**
3. **By mail with a check or credit card**

▷ Address Change Needed

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Prefix *(e.g. RADM, COL, Mr., Ms., Dr., etc.)* _____

Name: First _____ MI ____ Last _____

Military Affiliation _____ Nickname _____
(e.g. USMC, USA (Ret.) etc.) *(For meeting badges)*

Title _____

Organization _____

Street Address _____

Address *(Suite, PO Box, Mail Stop, Building, etc.)* _____

City _____ State _____ Zip _____ Country _____

Phone _____ Ext. _____ Fax _____

E-Mail _____

Signature* _____ Date _____

PREFERRED WAY TO RECEIVE INFORMATION
Conference Information ▷ Address above ▷ E-mail
Subscriptions ▷ Address above

Alternate Street Address _____

Alternate Address *(Suite, PO Box, Mail Stop, Building, etc.)* _____

City _____ State _____ Zip _____ Country _____

* By your signature above, you consent to receive communications sent by or on behalf of NDIA, its Chapters, Divisions and affiliates (NTSA, AFEI, PSA, WID) through regular mail, e-mail, telephone or fax. NDIA, its Chapters, Divisions and affiliates do not sell data to vendors or other companies.

CONFERENCE REGISTRATION FEES

	Early (Before 4/28)	Regular (4/28-6/07)	Late (After 6/07)
Government/Academia[1]	$395	$445	$495
Industry NDIA Member and affiliates (AFEI, NTSA, PSA, WID)	$495	$545	$615
Industry non-NDIA member[2]	$570	$625	$705
U.S. Active Duty Military	$ 90	$100	$110

No refunds for cancellations received after 6/7/10.
Substitutions welcome in lieu of cancellations!

[1] *Includes a free three-year NDIA membership and subscription to* National Defense *magazine for military and government employees.*

▷ No, do not sign me up for the free government membership.

[2] *Registration fees for non-NDIA (or affiliate) members include a one-year non-refundable NDIA membership —$15.00 will be applied for your 12 month subscription to* National Defense *magazine.*

PAYMENT OPTIONS

▷ **Check** (Payable to CBRN c/o Laser) ▷ **Government PO/Training Form #** _____

▷ **VISA** ▷ **MasterCard** ▷ **American Express** ▷ **Diners Club** ▷ **Cash** ▷ **Govt. Credit Card**

☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐ Credit Card Number ☐☐/☐☐ Exp. Date

Signature _____ Date _____

BY COMPLETING THE FOLLOWING, YOU HELP US UNDERSTAND WHO IS ATTENDING OUR EVENTS.

PRIMARY OCCUPATIONAL CLASSIFICATION. Check ONE.
- ▷ Defense Business/Industry
- ▷ R&D/Laboratories
- ▷ Army
- ▷ Navy
- ▷ Air Force
- ▷ Marine Corps
- ▷ Coast Guard
- ▷ DOD/MOD Civilian
- ▷ Government Civilian (Non-DOD/MOD)
- ▷ Trade/Professional Assn.
- ▷ Educator/Academia
- ▷ Professional Services
- ▷ Non-Defense Business
- ▷ Other _____

CURRENT JOB/TITLE/POSITION. Check ONE.
- ▷ Senior Executive
- ▷ Executive
- ▷ Manager
- ▷ Engineer/Scientist
- ▷ Professor/Instructor/Librarian
- ▷ Ambassador/Attaché
- ▷ Legislator/Legislative Aide
- ▷ General/Admiral
- ▷ Colonel/Navy Captain
- ▷ Lieutenant Colonel/Commander/ Major/Lieutenant Commander
- ▷ Captain/Lieutenant/Ensign
- ▷ Enlisted Military
- ▷ Other _____

Year of birth _____
(optional)

QUESTIONS, CONTACT:

JULIE VELDKAMP, MEETING PLANNER

PHONE: (703) 247-2577

E-MAIL: JVELDKAMP@NDIA.ORG

MAIL REGISTRATION TO:
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ARLINGTON, VA 22201

FAX TO: 703.522.1885

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ARLINGTON, VA 22201-3061
(703) 522-1820
(703) 522-1885 FAX
WWW.NDIA.ORG

2010 JOINT CBRN CONFERENCE & EXHIBITION

TO REGISTER, VISIT:
WWW.NDIA.ORG/MEETINGS/0300

PROMOTING NATIONAL SECURITY SINCE 1919

2010 JOINT CBRN CONFERENCE AND EXHIBITION

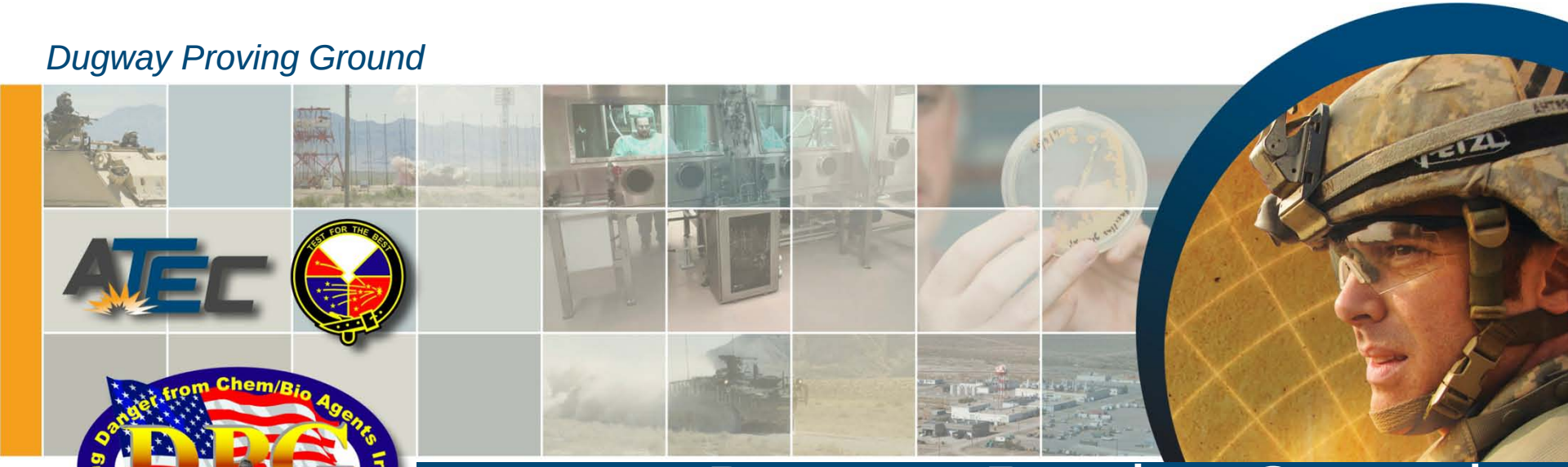
"Full Spectrum CBRN Operations"

JUNE 22-24, 2010
WWW.NDIA.ORG/MEETINGS/0300

FORT LEONARD WOOD, MISSOURI

EVENT #0300

Dugway Proving Ground



Dugway Proving Ground

Combating WMD-Warfighter Panel

Joint CBRN Conference 24 June 2010

Mission & Capabilities Overview

Approved for public release; distribution is unlimited.

Mission/Vision Statement

Protecting the national interests through operating of the nation's premier chemical and biological proving ground by:

- Adherence to Army Values
- Conducting Developmental and operational testing, advanced C/B training & TTP development support, training, and operational assessments to the highest scientific and technical standards
- ACTD/ATD/JCTD T&E Support
- Reach-back Support to SOCOM
- Fostering environmental stewardship
- Providing garrison support to the mission, and
- Exceeding customer expectations

Rendering Danger From Chem/Bio Agents Irrelevant

Staff Capabilities

- Unique mix of operational and technical personnel
  - PhD. Microbiologists
  - PhD. Chemists
  - PhD. Engineers
  - Former TEU/EOD/SOF/MI
- Matrix Management teams
- Extensive cross-training.
- Focus on customer interface (End user)
- Specialize in advanced developmental and operational testing and evaluation, training, and exercises



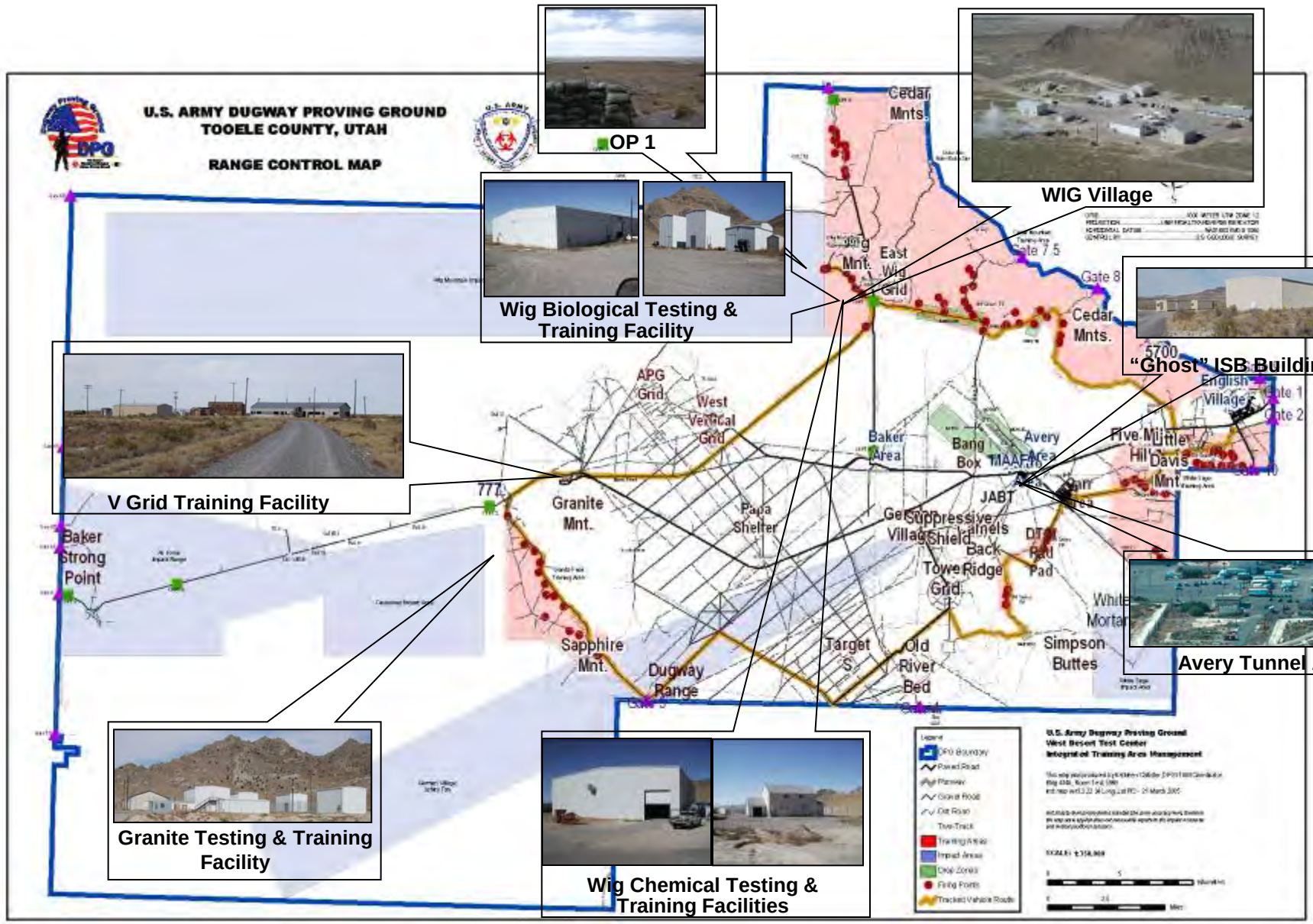


Facilities

- Multiple real-world test beds and training sites
- Multiple outdoor test and training ranges
- SPECAT Vaults
- SCIF with JWICS lines
- Classified (Secret) VTCs Suites

Approved for public release; distribution is unlimited.

REAL-WORLD TESTING AND TRAINING BEDS



Test Infrastructure

Labs



Reginald Kendell Combined Chemical Test Facility



Kuddes Operations Center



Lothar Salomon
Life Sciences Test Facility

Chambers





Melvin Bushnell
Materiel Test
Facility

Defensive Test Chamber



Michael Army Airfield

Combined Chemical Test Facility





Capabilities

- 35,000 square feet of multifunctional chemistry laboratories
- 47 agent certified fume hoods in 27 Surety-capable test suites
- Supports chamber and field testing of Chem-Bio defense systems
- Aerosol, vapor, and droplet testing with all chemical agents
- Support of Homeland Defense

Chemical Agents & Simulants

Agent	Simulant
-G Agents	13 licensed simulants
-VX	
-H-Series	
-Lewisite	

Life Sciences Test Facility



Capabilities

- **32,000 ft^2 of Multifunctional Biological Laboratories**
- ***Only U. S. Facility Equipped to Test with Aerosolized Biosafety Level 3 (BSL3) Agents***
- **Nine BSL2/3 Containment Suites**
- **Aerosol testing with pathogens, toxins, and simulants**
- **Support Homeland Defense**

Agents of Biological Origin & Simulants

Agent	Simulant
Biosafety Level 1-3 **- Bacteria** **- Viruses** **- Ricettsia** **Biological toxins**	**8 licensed simulants**





Test Chambers

Material Test Facility
- Stainless Steel Chamber (30’x50’x50’)
- Full environmental control

Defensive Test Chamber
- Certified for Chem-Bio simulants
- Man-in-simulant (MIST) testing

Bang Box
- Explosive material synthesis and testing
- Environmental characterization of explosive munitions

Joint Ambient Breeze Tunnel
- Simulant testing of Stand-off Chem-Bio Detectors





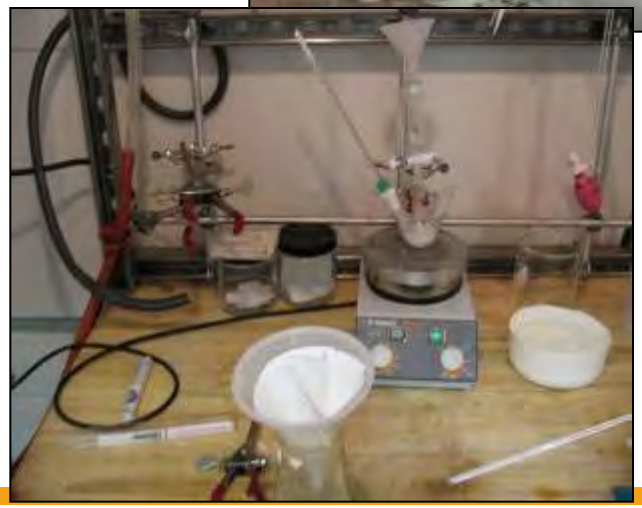




BANG BOX

- Explosive material synthesis and testing
  - –Peroxide Explosives Properties
  - – HMTD, TATP, DADP
  - –Peroxide Explosives as Initiators
  - –TATP Synthesis
  - –HMTD Synthesis
  - –RDX Synthesis
  - –ANFO Mixture







MUSTANG VILLAGE



- Hotel, Post Office, Warehouse, Strip Mall, Office Building
- Remote Terrorist Encampment
- Validate Tactics, Techniques, and Procedures
- Combat Maneuver Area, Live Fire Authorized
- Full use of C/B Simulants
- Escape & Evasion Scenarios

Approved for public release; distribution is unlimited.

Special Programs Division aFAST
Biological Laboratory Trailer







- State of art forensic level detection of biological material
  - DNA Extraction, amplification and detection.
- Custom Built 50’ van trailer w/4 slide out sections (2 per side) 940 Sq Ft.
- 208 VAC, 3 Phase, 200 AMP Service
  - On board 60 kW diesel Generator
- Waste water treatment system
  - Ozone gas/filtration treatment
  - Gray water re-use for lavatories
  - 50 State EPA legal over ground dumping per manufacturer
- Automated HVAC/Pressure System
  - BSL 2+/admin/Clean-room
- Collapsible “mud room”

SOCOM Support

- Reach-back
- Training
  - Chemical and Biological sampling, detection, decontamination, production, defeat
  - Explosive synthesis
  - Conventional training
- Testing
  - Technology development, TTP development







SOF/Conventional Training Support

- Conduct Air/Ground Deployment of Unit
- Conduct full SOF mission profiles
- Desert Warfare and live-fire ranges
- Land Navigation and Off-road Vehicle Mobility
- Unique Weapons Training Sites
- High Angle / Long Or Short Range Marksmanship
- Immediate Action Drills, React to IEDs
- HAHO, HALO jumps (9 drop zones)
- Close Air Support (CAS) ranges






Laboratory Training Programs

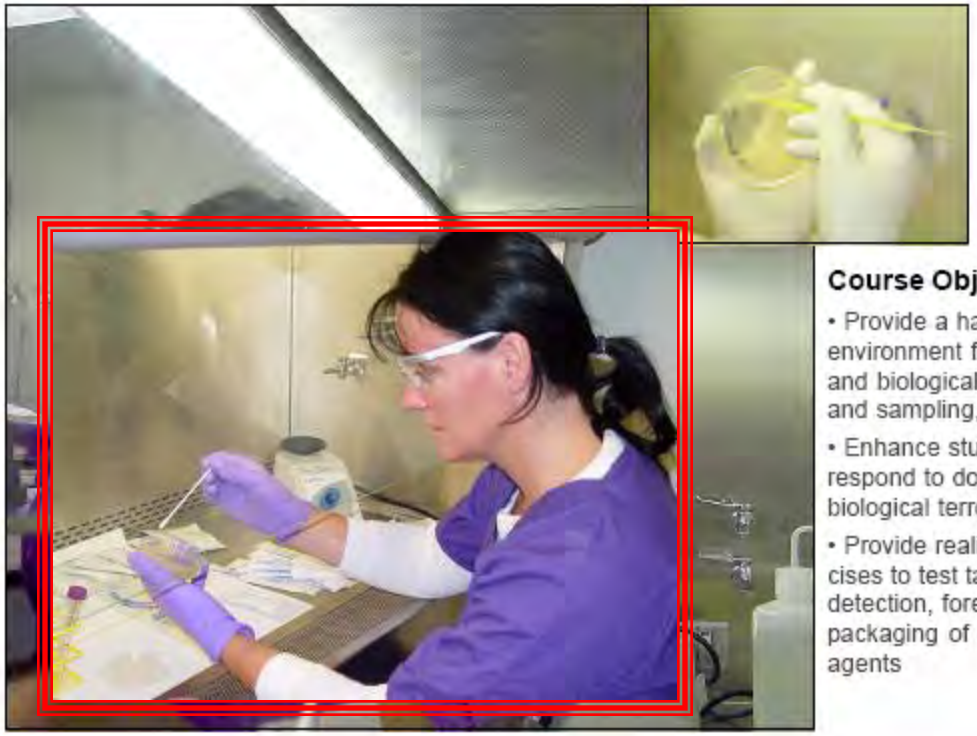
- Hands-on training with agents in Chemical & Biological laboratories
  - Detection of actual agents using units capabilities
  - Decontamination of actual agents using unit procedures
  - Confidence in working with hazardous materials



Field Training Activities

- Tailored to Unit Objectives
- Realistic Scenarios with role players
- Use of simulated CBW agents with unique disseminations
- Immediate feedback from SME's (Ph.D. Level)
- Interim After Action Reviews (AAR's) and Formal After Action Reviews
  - Exercise Video
  - SME input
- Results are confidential





- Advanced • Hands-On
- Real Agents and Simulants
- Realistic Scenarios

Course Objectives

- Provide a hands-on training environment focused on chemical and biological detection, signature, and sampling, for first responders.
- Enhance students' readiness to respond to domestic chemical or biological terrorist attack.
- Provide realistic practical exercises to test tactical skills in the detection, forensic sampling, and packaging of chemical/biological agents



Course Description

The Advanced Chemical and Biological Integrated Response Course (ACBIRC) is designed to provide students with hands-on incident-response opportunities in real and simulated chemical and biological environments. Critical first-responder topics are introduced in the classroom, translated into laboratory experiences, then enacted during a culminating, realistic-scenario exercise.

Taught by Ph.D.-holding subject matter experts, ACBIRC focuses on agent characteristics, sampling, protection, detection, decontamination, and signatures.



Students work with actual biological and chemical agents in laboratories rated at biological-safety levels 2 and 3 and in certified chemical facilities. Simulants that trigger detectors systems enhance practical exercises.

ACBIRC is one among various state-of-the-art counter-terrorism courses offered by U.S. Army Dugway Proving Ground's Special Programs Division.



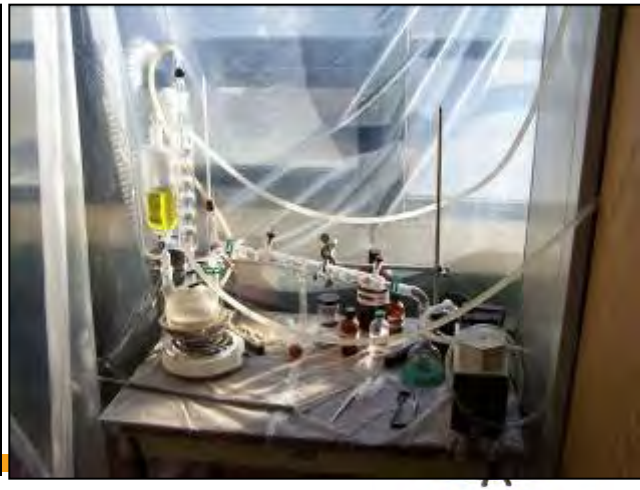
ACBIRC

WMD-CST PROGRAM

- Chem/Bio Level 1
- Chem/Bio Level 2
- Field Training Exercise (FTX)
- Mobile Training Team (MTT)
- Combination Courses (Multi week/CB L1 & FTX)







IC COUNTERPROLIFERATION TRAINING PROGRAM

- The most advanced WMD Counterproliferation and Counterterrorism training provided to intelligence officers anywhere in the U.S. government
- Primary provider of WMD Intel training to US Intelligence Community

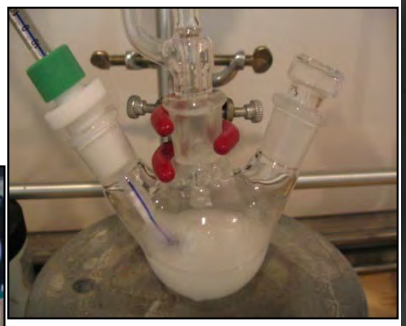


Chemical Energetics Course "CEC"

Theater-relative Terrorist Explosives synthesis, detection, identification, testing & mitigation

- **Peroxide Explosives TATP, HMTD**
- **Peroxide Explosives as Initiators**
- **Urea Nitrate**
- **Ammonium Nitrate Fuel Oil**
- **R-Salt**
- **RDX and C-4**
- **Picric Acid**
- **Silver Nitrate**
- **Silver Fulminate**
- **K9 Explosives Detection**

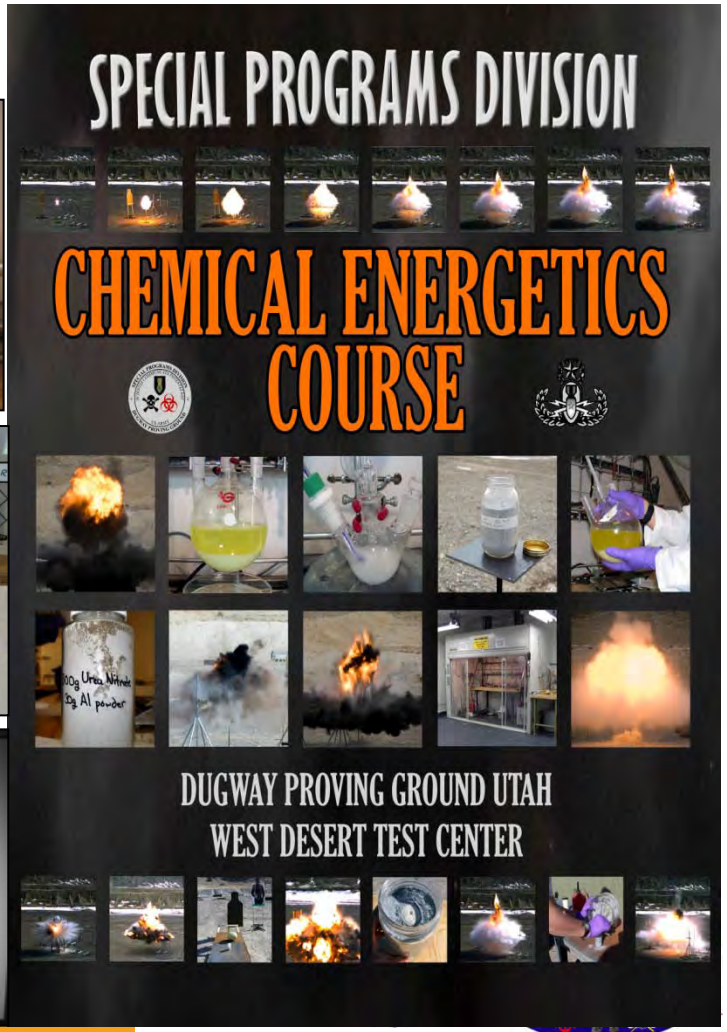










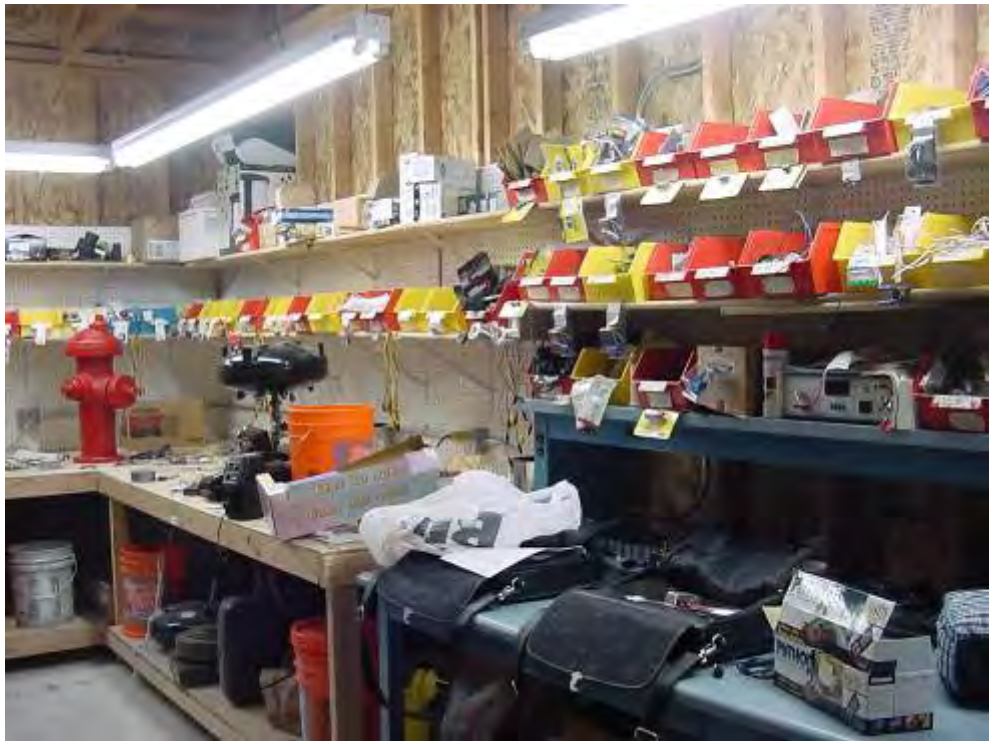


IED/IDD LAB

- Manufacture of IED/IDDs to meet customer reqs
- Conventional, Chemical and Biological devices
- IR, motion sensitive and remote detonation capability















Approved for public release; distribution is unlimited.

Training HME Targets







Approved for public release; distribution is unlimited.

MOBILE TRAINING TEAMS

- Multi-day chemical and biological exercises executed at teams' home station or location of own choosing
- Exercise scenarios presented in a variety of settings intended to challenge teams' Mission Essential Task List (METL)





Approved for public release; distribution is unlimited.

Avery Tunnel Confined Space Training Area











- Tunnel is concrete construction, similar to a storm drain of a city
- Used for operational testing
- TTP development and verification

Approved for public release; distribution is unlimited.

GWOT Training Facility

- Third world target
- Breaching walls
- Tunnel complex
- Heavily fortified
- Operational testing
- TTP development







Approved for public release; distribution is unlimited.

GWOT Training Facility





- Raven UAV images

V Grid Training Facility







- 2 Story Building, Ranch style House, Warehouse, Guard Shack
- Remote Terrorist Encampment
- Validate Tactics, Techniques, and Procedures
- Full use of C/B Simulants
- Remote Airfield, one mile

Approved for public release; distribution is unlimited.

Foreign Materiel Exploitation

- NGIC sponsored test
- Chemical simulant dissemination from foreign munitions











Bio-agent Dissemination

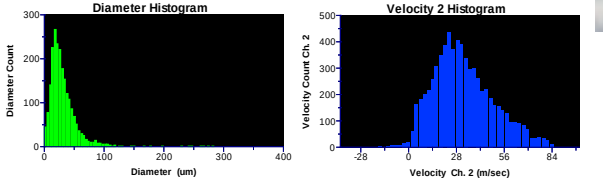
- Bio-characterization test in JABT
- Determined efficacy of COTS pesticide sprayers as bio-agent dissemination devices
- LD50 reached within 1 minute using crude preparation of *BG* spores (10E8 concentration)
- Particle size, velocity, and concentration measurements taken
- Published results









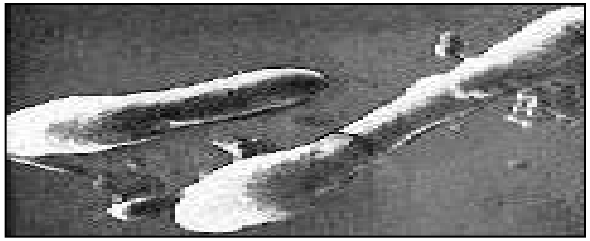


		PVC	Spatial
D10 (um)	31.57	0.00	0.00
D20 (um)	39.86	0.00	0.00
D30 (um)	52.26	0.00	0.00
D32 (um)	89.84	0.00	0.00
D43 (um)	155.32	0.00	
Size Data Rate (Hz)	196		
Size Valid Count	2182		
Epsilon Exception	368		
Diameter Exception	0		
Intensity Invalid	653		

	Channel 1	Channel 2	Channel 3
Velocity Mean (m/sec)	34.8584	32.2288	0.0000
Velocity RMS (m/sec)	23.8822	17.6096	0.0000
Turbulence Intensity (%)	68.51	54.64	0.00
Frequency Mean (MHz)	9.4158	11.2792	0.0000
Frequency RMS (MHz)	3.7105	2.8845	0.0000
Frequency TI (%)	39.41	25.57	0.00
Gate Time Mean (usec)	2.15	1.66	0.00
Gate Time RMS (usec)	2.13	1.55	0.00
Data Rate (Hz)	196	417	0
Valid Count	3203	6797	0
Invalid Count	0	0	0
Elapsed Time (sec)	16.2810		

Biological Agent Production

- Examination of terrorist and state sponsored protocols for extraction and production of Ricin and Botulinum toxins
- Storage, stability and extraction efficiency were measured using assays unique to DPG

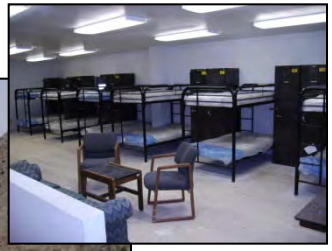






Georgia







- Full Scale Biological Training and Testing Facility
- Isolation Facility
- Classroom/Planning area
- Sleeping bay for 20 Personnel



Wyoming

- Full Scale Biological Testing & Training Facility

- Isolation Facility
  Classroom/Planning area
  Sleeping bay for 20 Personnel

- Warehouse/Storage onsite



Yellowstone
Cheyenne

- Full Large Scale Chemical Testing and Training Facility



- Full Intermediate Scale Chemical Testing and Training Facility



Ghost Building

Training/ Sleeping/ Storage

- Classroom
  50' X 50'
  70+ Students
- Storage/Sleeping Area
  50' X 150'
  1 Communications Vault
  1 Weapons Vault
  Showers/Restrooms
- 2 Command Buildings
  Detached from Building
  Phones/Offices
- 3 Drop Zones Nearby
- Near Runway



DUGWAY
MICHAEL ARMY AIRFIELD

- Capable of handling all Army & Air Force aircraft
- Fully lit 11,000 ft. runway for departures (10,000 ft. for landing)
- **7,000 ft. taxiway**
- Aircraft Decon Pad
- 20,000 ft^2 hangar with office space, classroom and ground handling equipment
- Secured installation in restricted airspace
- All season operations
- Crash rescue operations on the airfield
- Aviation gas capable





DUGWAY SUPPORT

- Mission Control Center
- Secret Vault at WDTC
  - Secret VTC capability
- Top Secret secure facility at English Village Command Center
- Range Control Operations Video Conference Centers (VCC)
- Meteorological Support
- Logistic Support
- Ammo Storage Facilities
- 24 hour security
- Manned Fire and Medical Aid





DUGWAY PROVING GROUND

QUALITY OF LIFE

- Community Club
- Shoppette/BX
- Lodging/Barracks
- Commissary
- 24 Hour Security Force
- Manned Fire and Medical Aid
- Recreation
  - Golf Course
  - Bowling Center
  - Theater
  - Fitness Center
  - Swimming Pool



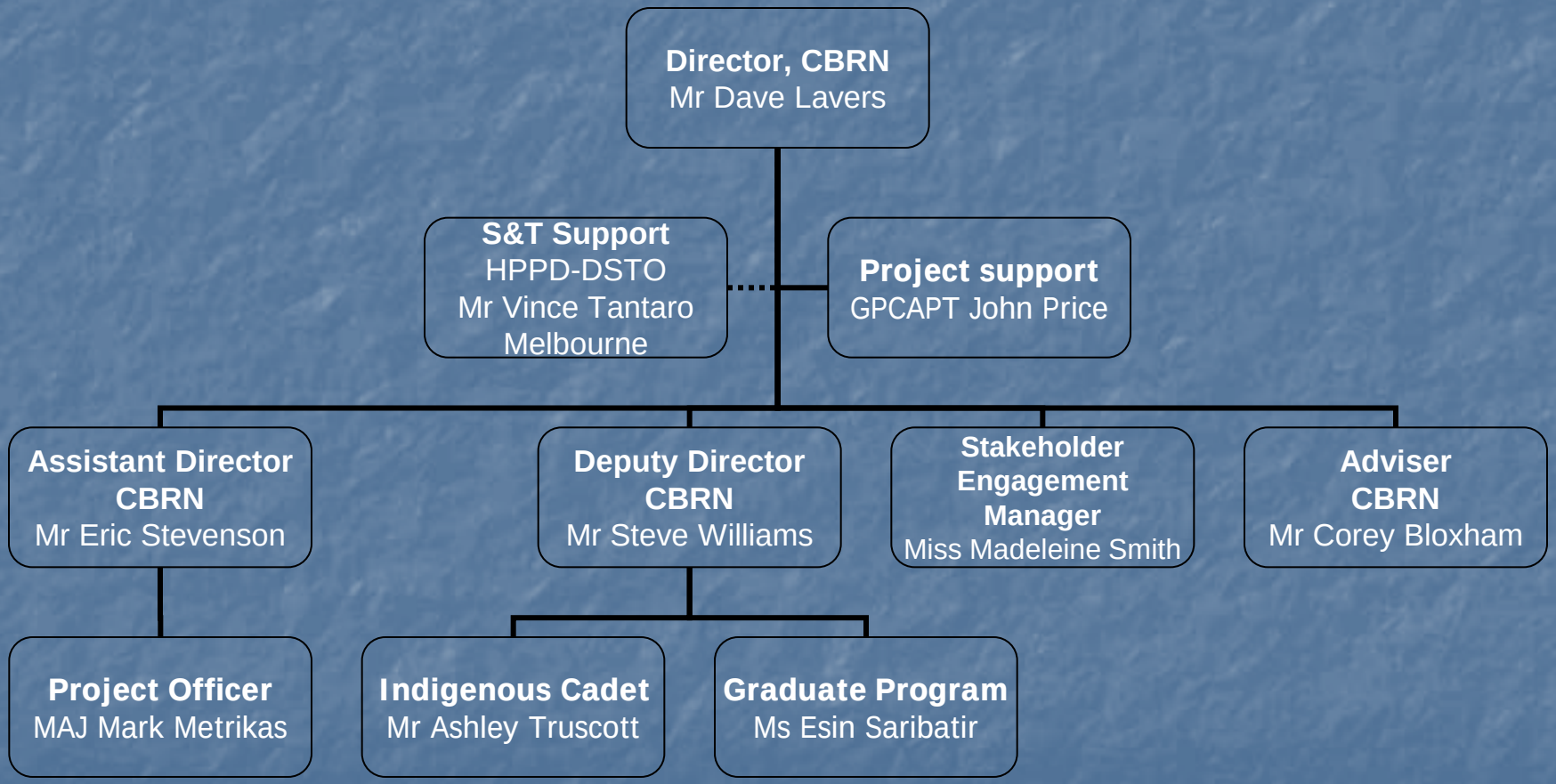
How Clean is Clean

Dave Lavers
Director, CBRN Directorate
Australian Department of Defence

24 Jun 10



Australian CBRN Directorate



Leave – Miss Stephanie Kimonides

Organisation CBRN Directorate

- Role:
  - Influence and coordinate the development and management of joint CBRN capabilities and concepts
- Goals:
  - Monitor Defence CBRN capability
  - Develop Joint CBRN policy
  - Engage with other CBRN organisations
  - Enhance CBRN interoperability



‘Household’ Terrorist



Georgia Alex Lavers, Aged 9yrs

Scope of Presentation

- Defining clean
- Public perception / confidence
- Role and importance of facts
- How clean is clean?

Defining clean

Why this topic?

- ‘how clean is clean’ can’t be answered!
- There is an answer to everything!
- There must be an answer!
- What if we do not answer the question?

Defining ‘Clean’ – the Web:

- free from dirt or impurities;
- free of restrictions or qualifications;
- not spreading pollution or contamination; especially radioactive contamination;
- "the tactical bomb is reasonably clean"
- make clean by removing dirt, filth, or unwanted substances from.

Considerations

- Awareness
- Science
- Education
- Benchmarks
- Research
- Technology
- Standards
- Equipment
- Legal Framework
- Training
- Legislation
- Plans
- Policy

Functional areas

- Science
- Technology
- Research

- Science & Technology

- Equipment
- Training
- Plans

- Equipment, Training & Plans

- Benchmarks
- Standards
- Legal Framework
- Policy
- Legislation

- Legislation, Policy & Standards

- Awareness
- Education

- Education & Awareness

Key Domains influencing the Question

- Science & Technology
- Legislation, Policy & Standards
- Equipment, Training & Plans
- Education & Awareness

Exploring how clean is clean

- Clean enough?
- For what purpose?
- Does it need to be clean?
- Opportunity cost of not cleaning?
- Opportunity cost of cleaning?
- Legal standards for the specific situation? - validated?

Public perception / confidence

Perception of Clean





Perception of Clean





Perception of Clean





Perception of Clean





Perception of Clean





Perception of Clean





Perception of Clean





Role and importance of facts

Event = Decision





- an event is a FACT
- a FACT will influence perception
- a FACT must be addressed
- FACT = reality

Perception of Safe



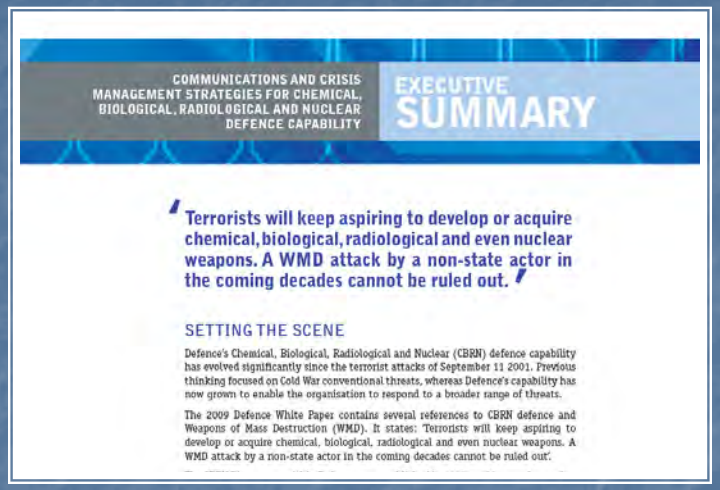
Event = Decision





- Critical event demands an answer.
- FACT alters perception.
- HOW CLEAN IS CLEAN ENOUGH?

Communication Strategy



COMMUNICATIONS AND CRISIS MANAGEMENT STRATEGIES FOR CHEMICAL, BIOLOGICAL, RADIOLOGICAL AND NUCLEAR DEFENCE CAPABILITY

EXECUTIVE SUMMARY

Terrorists will keep aspiring to develop or acquire chemical, biological, radiological and even nuclear weapons. A WMD attack by a non-state actor in the coming decades cannot be ruled out.

SETTING THE SCENE

Defence's Chemical, Biological, Radiological and Nuclear (CBRN) defence capability has evolved significantly since the terrorist attacks of September 11 2001. Previous thinking focused on Cold War conventional threats, whereas Defence's capability has now grown to enable the organisation to respond to a broader range of threats.

The 2009 Defence White Paper contains several references to CBRN defence and Weapons of Mass Destruction (WMD). It states: 'Terrorists will keep aspiring to develop or acquire chemical, biological, radiological and even nuclear weapons. A WMD attack by a non-state actor in the coming decades cannot be ruled out'.







Nexus of Perception and Fact!

Fictional scenario

- Device explosively disseminated - liquid and vapour drift across stadium
- Facts
  - Casualties
  - Mass panic
  - The ‘worried well’
  - Logistical burden
- Facts
  - Medical and contamination control issues
- Facts
  - Contamination density?
  - Cleanup and reuse requirements?



Quantifying FACTS

- Clear need for a defensible, transparent decision support tool
  - Data Quality Objective (DQO)
    - Bob Muir & Steven Wilkinson
- DQO deals with fact and will illustrate fact.
- A coherent communications strategy will aid in selling the facts



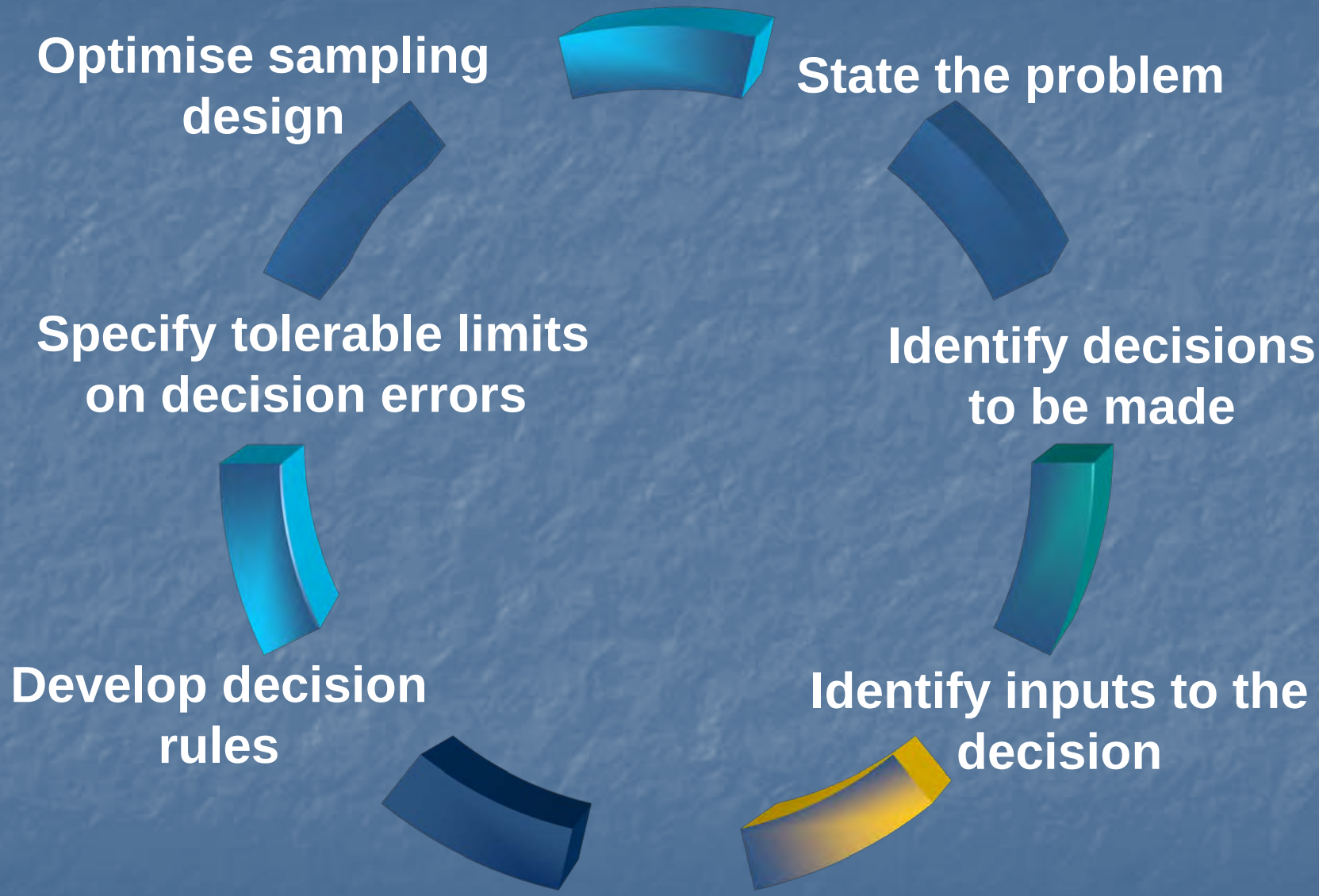
What is DQO?

- USEPA procedure- systematic
- Defensible and robust
- statistical probability for uncertainty management
  - estimates = errors
  - errors are not mistakes
- reduces decision errors (mistakes)



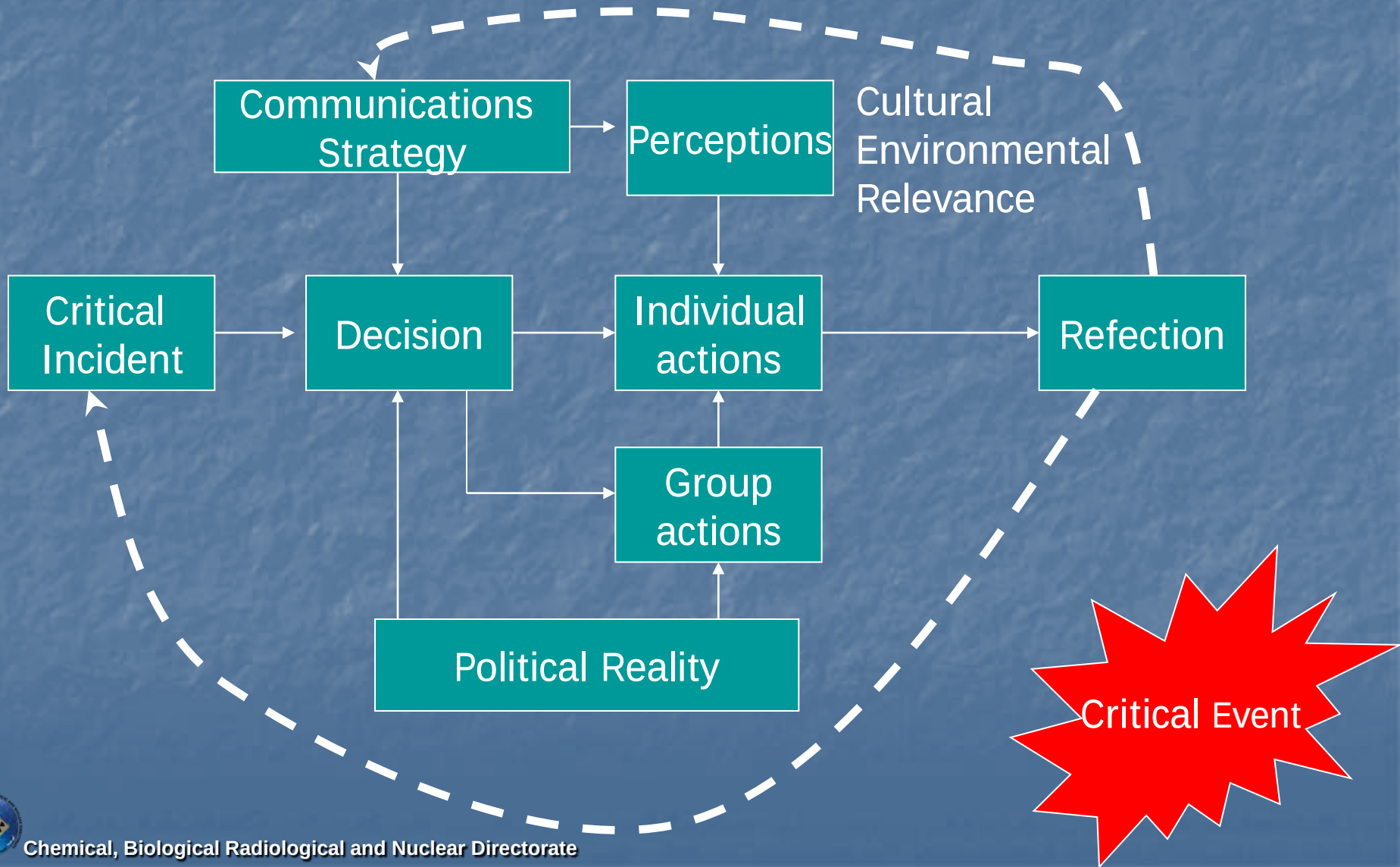


Overview of DQO process

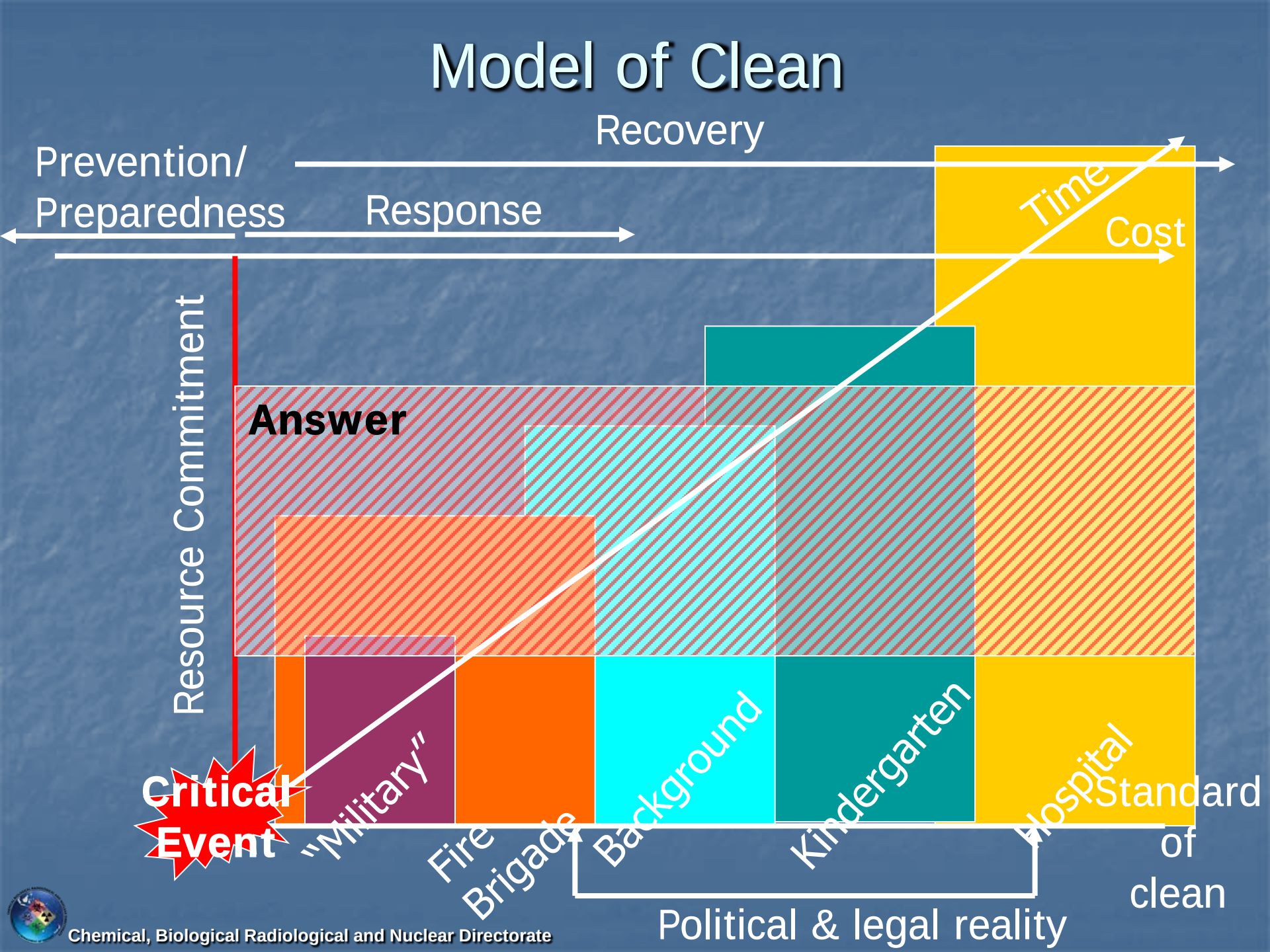


How clean is clean?

Model of a Critical Event



Model of Clean



Making the decision





Discussion

- Many decisions are non-rational and based upon perception;
- Decisions should be informed by science;
- Science is not the decision maker;
- How clean is clean is a social question, not a science question.

What do we need to do?

- process, not specific standards
- enable specific standards to quickly be developed
- process endorsed at highest level
- ‘play book’ of indicative standards
- science, should aid the decision

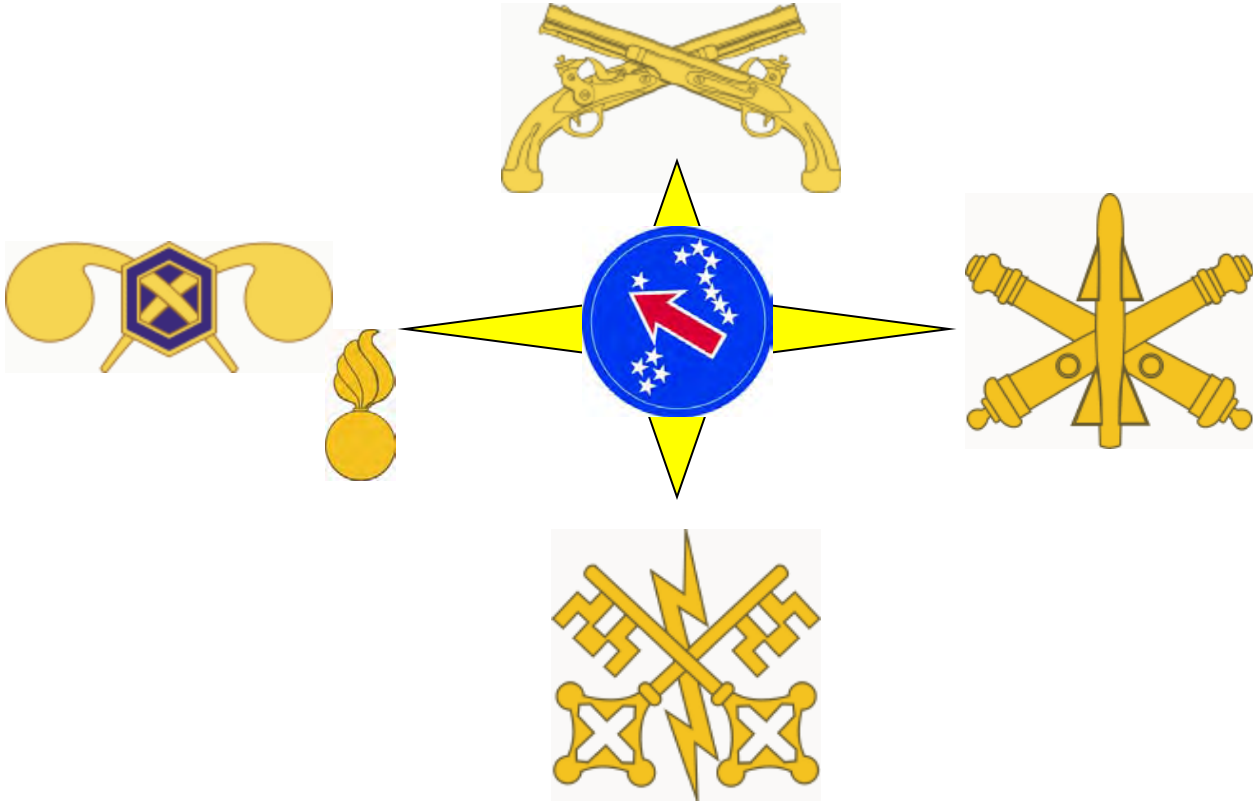


Conclusion



Georgia Alex Lavers, Aged 9yrs - '*Household' Terrorist*

Operational Protection Directorate
U.S. Army Pacific



AMD – AT/FP – CBRNE - PMO

USARPAC CBRNE Program Update

Mission

Advise CDR and Staff of USARPAC on all aspects of CBRNE/WMD/EOD; to include capabilities, training, manpower, and readiness. Combat adversary use of CBRNE/WMD/EOD by leveraging functional expertise in support of installation protection and preparedness, coordination for DOD response, and increasing awareness in theater. Support training, planning and operations as directed to fulfill requirements within the discrete skill sets of CBRNE/WMD/EOD. Provide training readiness oversight of WMD-CSTs in AOR and serve as the Operational Manager for Joint CBRNE acquisition programs. Provide staff support and coordination for all CBRNE/WMD/EOD operations in the Pacific Theater.

Outline:

- CBRNE Program Overview
- Plans and Programs
- Current Capabilities

Program Review (1 of 2):

- CBRNE Division aligned under Operational Protection Directorate in AUG 07
- Final structure and functions under ASCC Redesign
- Current staffing is:
  - 1 x COL (74)
  - 1 x SGM (74)
  - 1 x MSG (74)
  - 1 x DAC (Wpns Tech)
  - 3 x Support Contractors (Part Time)
    - Converting to DA Civilians
- Lack military EOD expertise and dedicated planning capacity

Program Review (2 of 2):

- 2001 – USARPAC analysis of CBRNE shortfalls completed
  - Identified gaps in installation protection and first responders
  - Training and equipping of FED Fire Departments
  - Training of installation response organizations

- 2007 – CONUS-based CCMRF mission evolved
  - USARPAC CBRNE Division reviewed requirements
  - Focused on equipping the warfighter (ICEMP)
  - Identified shortfall in active duty first responders
  - Initiated program to train soldiers in 71st and 95th CM
  - Continued training and equipping of FED Fire Departments
  - Continued support of installation response training

Plans and Program:

- 2008 – Focus on active capability and regional assets
  - Sent 23 soldiers to the Civil Support Skills Course (ongoing)
  - Put contract in place for equipment management and support
    - Equipment sets with FED Fire, EOD, CBRN School
  - Articulated mission for the 71st and 95th Chemical Companies
    - Outlined METL tasks and scope of mission
    - Initiated integrated training with WMD-CSTs
    - Programmed equipment issue

- 2009/10 – Continue to press the fight
  - Articulate requirements of USARPAC CBRN Response mission
  - Issue equipment sets
  - Continue soldier training; establish certification program
  - Complete Operational Need Statement for NBCRS II
  - Secure funding for sustainment
  - Continued work with PACOM/JTF-HD to build Joint CBRNE response capability
  - Continued support to installation protection programs

Problem Statement:

- Complex mission criteria due to time, distance, and lack of forces
- CBRNE response and Consequence Management in the Pacific must be a joint effort

Mitigation Strategy:

- Continue to fulfill passive defense measures to the fullest extent
- Continue to support Installation Protection programs
- Increase capability of the active duty Chemical Companies
    - Manning – establish **Active Response CBRN (ARC) Teams**
    - Training – formally establish teams; conduct training and certification
    - Equipping – provide COTs training sets; program "green" sets for FY 10
    - Sustainment - Interoperability with FED Fire, WMD CSTs, and Civilian Agencies

United States Army, Pacific

US Army Pacific

US Army Alaska

- Administrative Headquarters
- 172nd Brigade (Stryker)
- 4th Brigade, 25th Infantry Division (Airborne)
- Aviation TF 49
- Alaska Army National Guard

Fort Lewis, Washington

- Headquarters, I Corps (OPCON)
- 3 x Stryker BCT (2 x OPCON)

rmy Japan

- Administrative Headquarters
- 9th Theater Support Command
- 10th Area Support Group

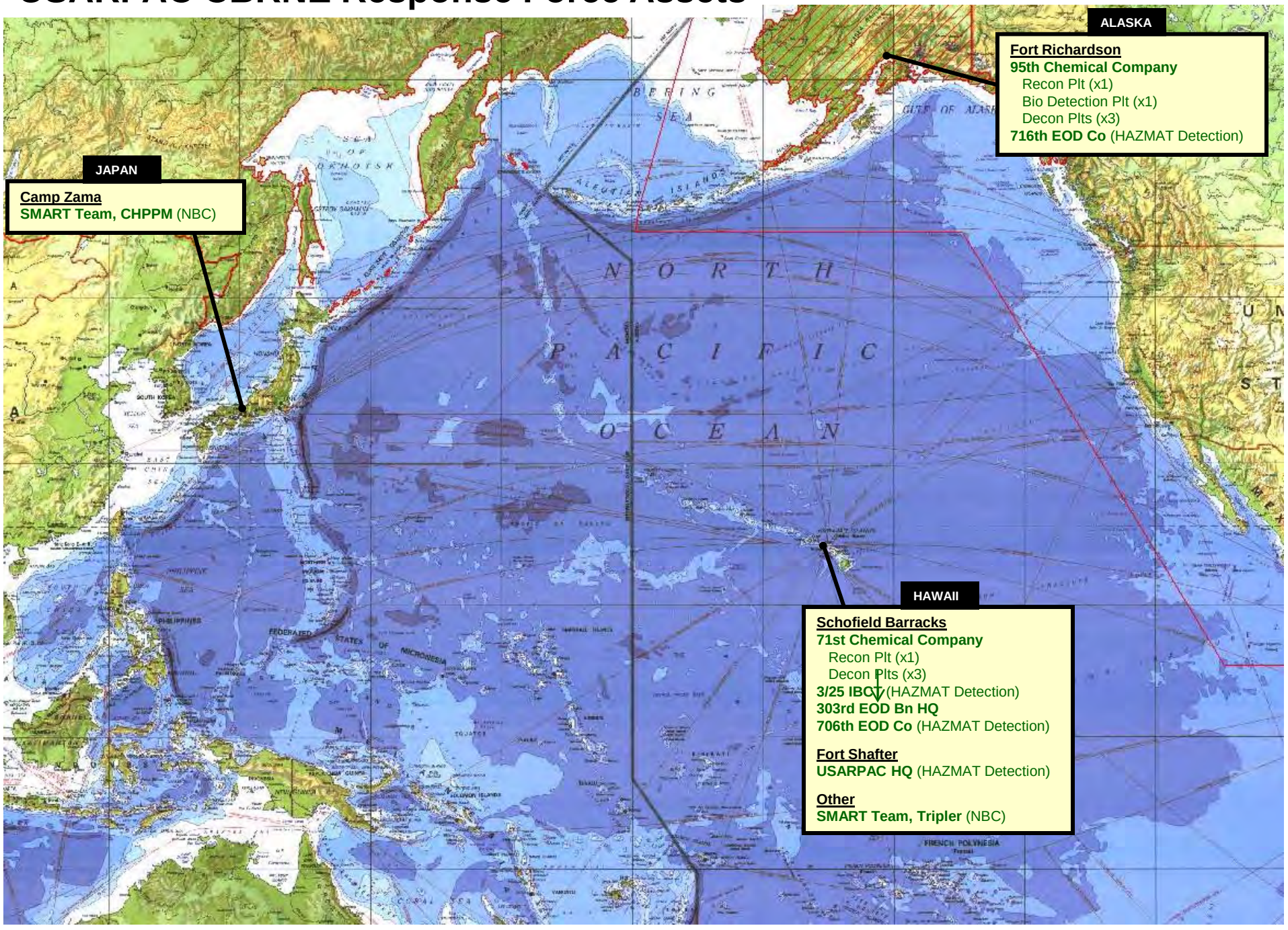
A P A

- Army Service Component Command
- 25th Infantry Division
  - 2nd Brigade (Stryker)
  - 3rd Brigade (Light Infantry)
- 25th Combat Aviation Brigade
- 29th Infantry Brigade (National Guard)
- 9th Regional Readiness Command
- 8th Theater Sustainment Command
- 311th Theater Signal Command
- 94th Army Air & Missile Defense Command
- 45th Sustainment Brigade
- 500th Military Intelligence Brigade
- 516th Signal Brigade
- 196th Infantry Brigade



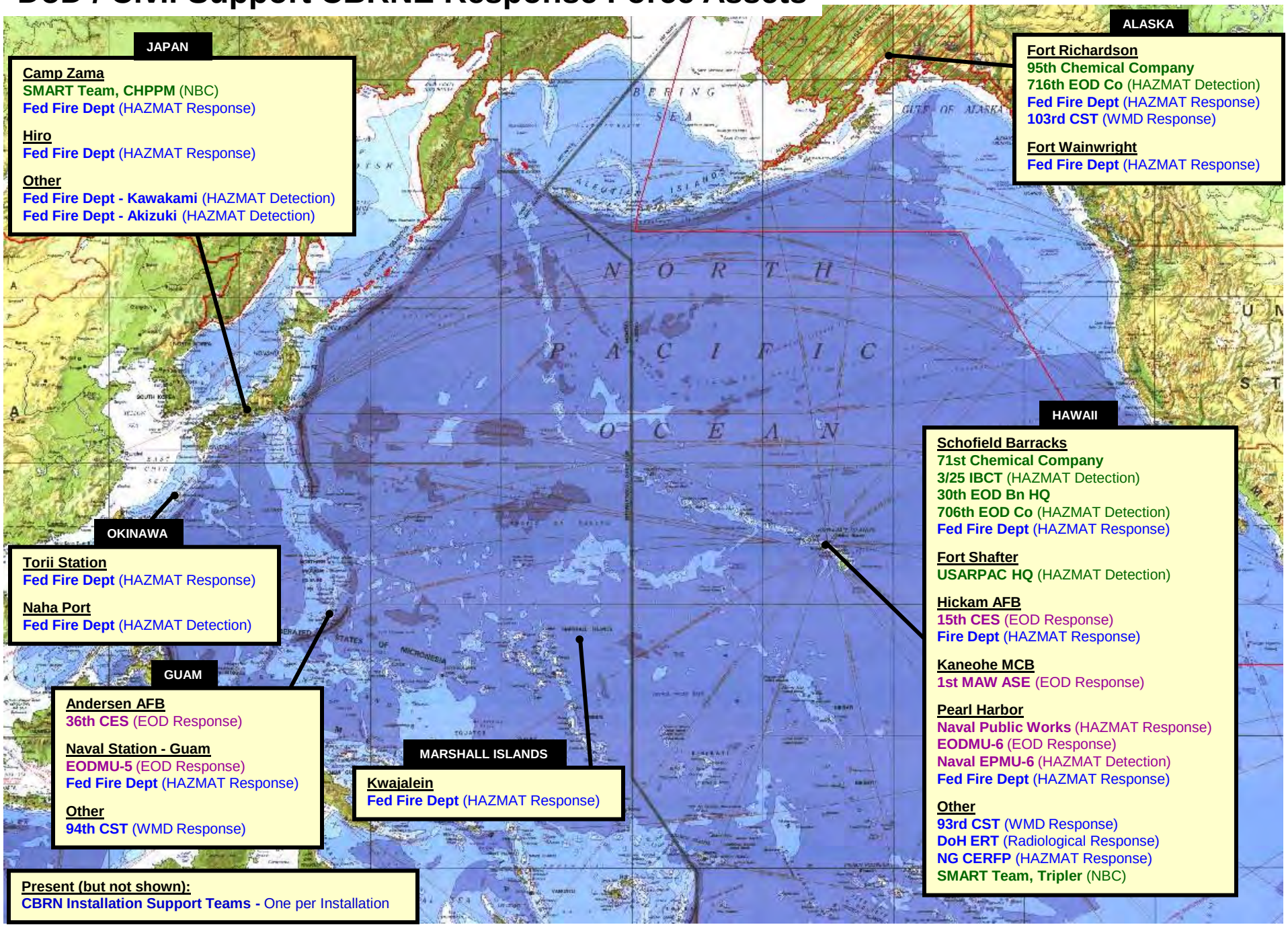
USARPAC CBRNE Consequence Management Response Force Status

USARPAC CBRNE Response Force Assets



DoD / Civil Support CBRNE Response Force Assets

Army | Joint | Civil Support



JAPAN

Camp Zama
SMART Team, CHPPM (NBC)
Fed Fire Dept (HAZMAT Response)

Hiro
Fed Fire Dept (HAZMAT Response)

Other
Fed Fire Dept - Kawakami (HAZMAT Detection)
Fed Fire Dept - Akizuki (HAZMAT Detection)

ALASKA

Fort Richardson
95th Chemical Company
716th EOD Co (HAZMAT Detection)
Fed Fire Dept (HAZMAT Response)
103rd CST (WMD Response)

Fort Wainwright
Fed Fire Dept (HAZMAT Response)

OKINAWA

Torii Station
Fed Fire Dept (HAZMAT Response)

Naha Port
Fed Fire Dept (HAZMAT Detection)

GUAM

Andersen AFB
36th CES (EOD Response)

Naval Station - Guam
EODMU-5 (EOD Response)
Fed Fire Dept (HAZMAT Response)

Other
94th CST (WMD Response)

MARSHALL ISLANDS

Kwajalein
Fed Fire Dept (HAZMAT Response)

HAWAII

Schofield Barracks
71st Chemical Company
3/25 IBCT (HAZMAT Detection)
30th EOD Bn HQ
706th EOD Co (HAZMAT Detection)
Fed Fire Dept (HAZMAT Response)

Fort Shafter
USARPAC HQ (HAZMAT Detection)

Hickam AFB
15th CES (EOD Response)
Fire Dept (HAZMAT Response)

Kaneohe MCB
1st MAW ASE (EOD Response)

Pearl Harbor
Naval Public Works (HAZMAT Response)
EODMU-6 (EOD Response)
Naval EPMU-6 (HAZMAT Detection)
Fed Fire Dept (HAZMAT Response)

Other
93rd CST (WMD Response)
DoH ERT (Radiological Response)
NG CERFP (HAZMAT Response)
SMART Team, Tripler (NBC)

Present (but not shown):
CBRN Installation Support Teams - One per Installation

Current Capabilities (Overview):

- USARPAC CBRNE Staff
  - 7 x Incident Management Trained
  - 1 x Toxic Material Handler Trained
  - 1 x Munitions Technician/EOD
  - 1 x Hazard Technician Certified
  - 1 x CSSC Trained/HazTech Certified
  - 2 x CBRN Equipment Sets w/robotic platform

Current Army Capabilities (Overview):

- Active Duty
  - 71st Chemical Company
    - 10 CSSC Trained Soldiers
  - 95th Chemical Company
    - 13 CSSC Trained Soldiers
  - 30th EOD Battalion

- National Guard
  - 93rd WMD CST – Hawaii
  - 94th WMD CST – Guam
  - 103rd WMD CST – Alaska
  - CERF-P – Hawaii

Other Capabilities (Overview):

- Department of Defense
  - Federal Fire Departments Trained and Equipped
    - Pearl Harbor
    - Schofield Barracks
    - Wheeler AAF
    - Fort Richardson/Elmendorf AFB
    - Fort Wainwright
    - Camp Zama
    - Torii Station
    - Kure

Other Capabilities (Overview):

- Other Key Players
  - Tripler/Pacific Regional Medical Center
    - Regional Medical planner
    - SMART Teams
  - Joint Services
    - Navy and Marine EOD
    - Navy Preventive Medicine
    - Navy and Air Force Damage Control and Crash Teams
      - Nuke, Rad, and Fire


Army Strong

REFERENCES

- The Medill National Security Journalism Initiative; http://medillnsj.org/06/2010/news-and-analysis/2395/
- Washington National Guard to establish first Homeland Response Force; http://www.king5.com/news/local/Washington-National-Guard-to-establish-first-Homeland-Response-Force--95533744.html
- Chemical, Biological, Radiological, Nuclear and High Yield Explosive (CBRNE) Consequence Management Reaction Force (CCMRF); http://www.army.mil/aps/09/information_papers/cbnre_consequence_mgmt_ccmrf.html and http://www.northcom.mil/news/2008/091908_a.html
- 71st Chemical Team Gives Pacific New Capability; http://www.army.mil/-news/2009/06/11/22535-71st-chemical-team-gives-pacific-new-capability/index.html
- 95th Chem. responded to assist the Valdez Fire Department ; http://www.usarak.army.mil/alaskapost/Archives2008/080627/Jun27Story9.asp
- Tripler SMART team; http://www.tamc.amedd.army.mil/services/PRMC/SMART/smart.html

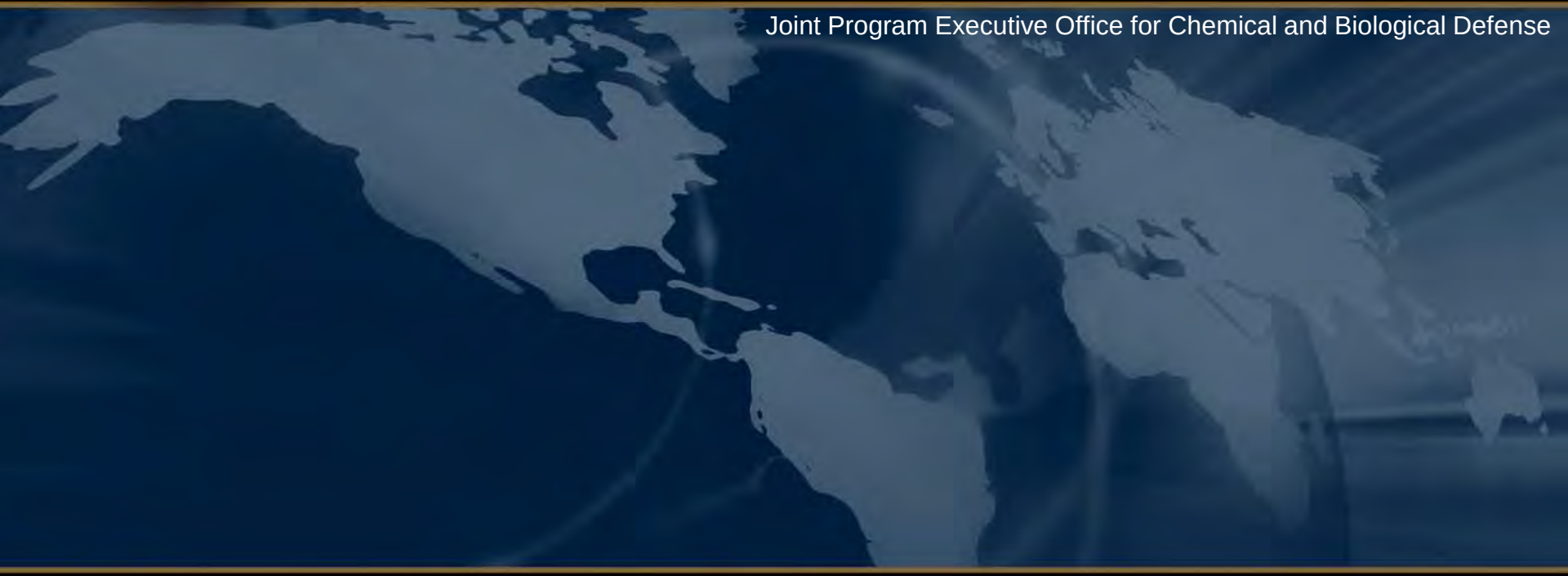
REFERENCES (cont.)

- USACHPPM-PAC; http://chppm-www.apgea.army.mil/documents/FACT/90-003-0504.PDF

UNCLASSIFIED

Joint Material Developer Shaping CWMD Enterprise

Joint Program Executive Office for Chemical and Biological Defense



Jess A. Scarbrough
Brigadier General, USA
Joint Program Executive Officer for
Chemical and Biological Defense
703.681.9600

June 23, 2010

Distribution Statement A: Approved for public release; distribution is unlimited.

CBD Defense Program Leadership

Under Secretary of Defense (Acquisition, Technology & Logistics)

Dr. Ashton Carter



Assistant to the Secretary of Defense (Nuclear & Chemical & Biological Defense Programs)

Hon. Andrew C. Weber



Chairman, Joint Chiefs of Staff

Admiral Mike Mullen



Secretary of the Army

Mr. John McHugh



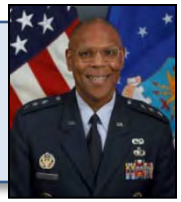
Acting Deputy Assistant to the Secretary of Defense for Chemical & Biological Defense/Chemical Demilitarization

Dr. James Harvey



Director for Force Structure, Resources & Assessment, J8 The Joint Staff

Lt Gen Larry Spencer USAF



CBDP Test and Evaluation Executive

Mr. James C. Cooke



Assistant Secretary of the Army for Acquisition, Logistics & Technology

Hon. Malcolm Ross O'Neill



Director for the Defense Threat Reduction Agency & U.S. Strategic Command Center for Combating Weapons of Mass Destruction

Mr. Kenneth A. Myers III



Director, Joint Requirements Office CBRN Defense

RADM Archer M. Macy, Jr.



Joint Program Executive Officer for Chemical & Biological Defense

BG Jess Scarbrough



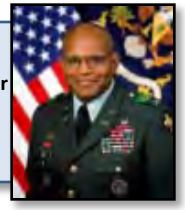
Acting Director, Joint Science and Technology Office for Chemical and Biological Defense

COL Mike O'Keefe



Joint Combat Developer

BG Les Smith



Operational Control

Oversight

JPEO-CBD Mission:

Provide Research, Development, Acquisition Fielding and Life-Cycle Support of Chemical, Biological, Radiological and Nuclear Defense Equipment, Medical Countermeasures, and Installation and Force Protection Integrated Capabilities Supporting the National Strategies.

JPEO-CBD Organizational Chart

DoD
Army
Navy
Air Force
Marines

DEFENSE ACQUISITION EXECUTIVE
ARMY ACQUISITION EXECUTIVE


Deputy JPEO Medical Sys
COL (Dr.) Jonathan Newmark
703.681.9677


Senior Enlisted Advisor
MSG Ronald Mendoza
703.681.9670


JPEO
BG Jess Scarbrough
703.681.9600


DJPEO
Mr. Doug Bryce
703.681.9600


Director Contracts
RDECOM
Gregory Davies
703.681.1276


Chief of Staff
Mr. Scott Paris
703.681.9616

JOINT PROJECT MANAGERS


Biological Defense
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410.436.5617


CB Medical Systems
COL David Williams
301.619.7681


Contamination Avoidance
COL Daniel McCormick
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Collective Protection
Mr. Michael Abaie
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JOINT PROJECT MANAGERS


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703.681.0612


Individual Protection
Mr. Will Hartzell
703.617.2444


Information Systems
Mr. Scott White
858.537.0120


TMTI *
Mr. David Hough
703.767.2714

DIRECTORS


Knowledge Management
Mrs. Brenda Besore
703.681.1283


Business Operations
Ms. Karan Williams
703.681.5193


Current Acquisition
Mr. Gary Olejniczak
703.681.0806

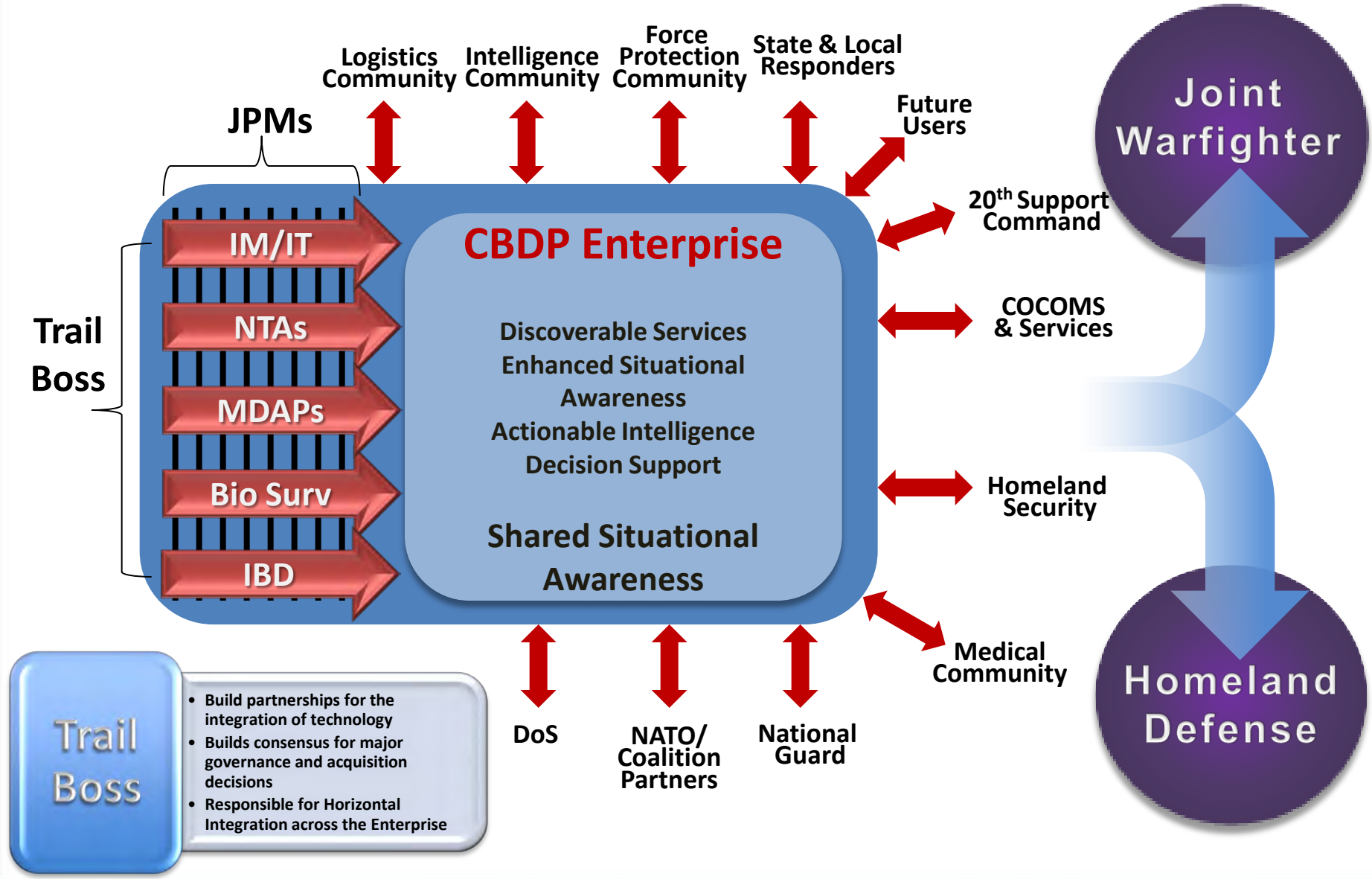
DIRECTORS


Future Acquisition
Ms. Camille Schumacher
703.681.9607


Human Resources
Mr. Darrell McCarthy
703.681.9670

** Transformational Medical Technology Initiative (provisional)*

Trail Boss
CBDP Enterprise Management

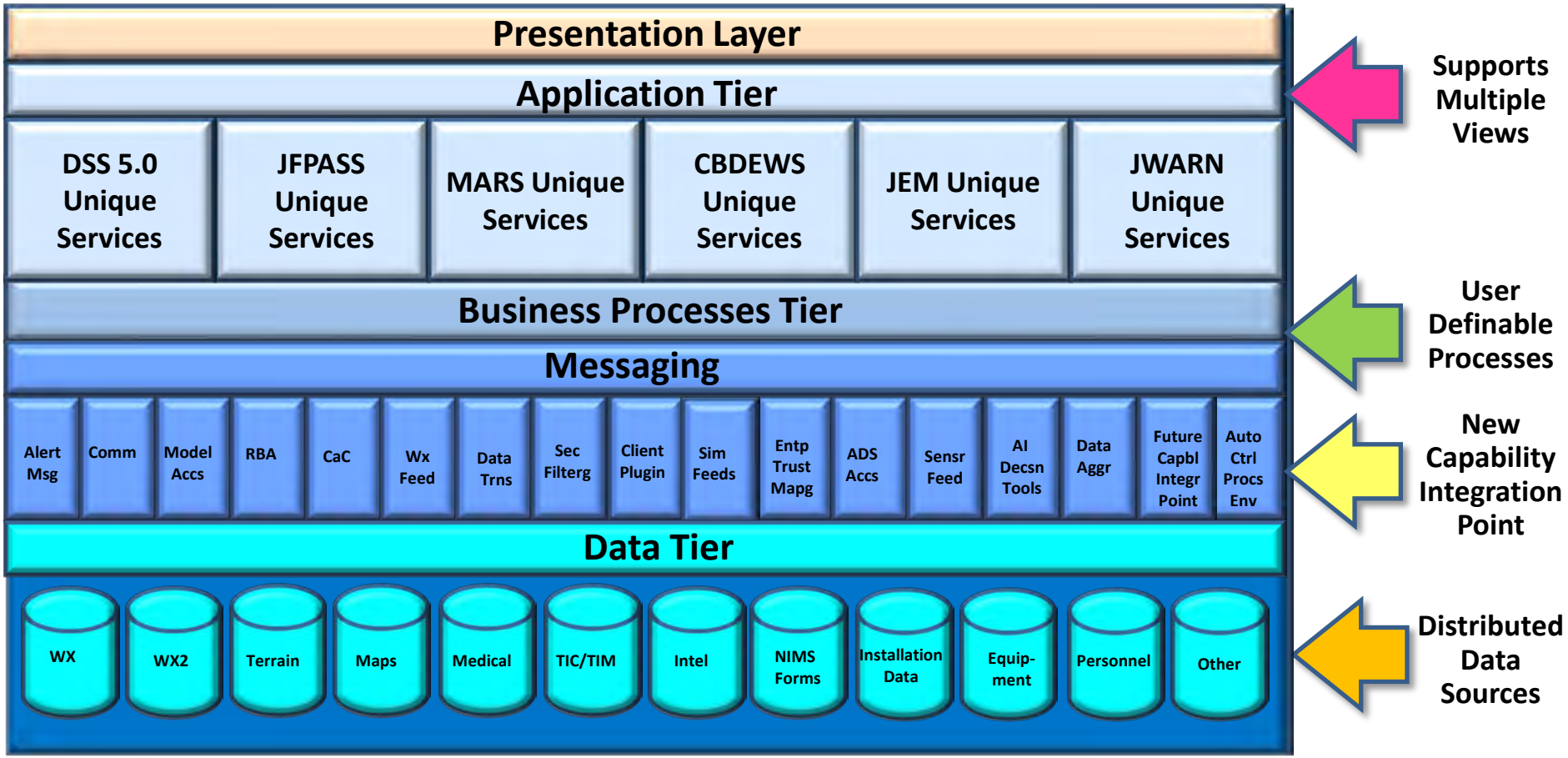


Questions?

Back-ups

UNCLASSIFIED

Trail Boss
CBRN IM/IT Services to Joint Enterprise



Result is an Integrated and Modular Service Oriented CBRN Architecture that Provides Fast, Accurate and Standard Actionable Information for Command Awareness and Decision Making

Trail Boss:
Non-Traditional Agents (NTA)











Fielding Near-Term Solutions for the Warfighter
Doctrine, Equipment, and Training

Address Next Generation
Capability Needs

Delivering a Total Integrated National Defense Capability
to Protect Warfighter and Homeland from Emerging Threats

Trail Boss: Major Defense Acquisition Program Support

Increasing Equipped Platforms...



- Improved Surveillance
- Enhanced Situational Awareness

MAXIMIZE CBR DETECTION AND EARLY WARNING

Integrate CBR Defense Systems as Part of Design and Development for the Joint Forces

Trail Boss: DoD's Path Forward in Supporting Biosurveillance

- Sensor & Medical Diagnostic Capabilities
- Information Integration







NEXT GENERATION CAPABILITIES

INCREASED CONFIDENCE: Presumptive to Confirmative

NATIONAL BIOSURVEILLANCE INTEGRATION SYSTEM (NBIS)

Within Existing Policy & National Biomonitoring Architecture

National Biosurveillance Integration Center (NBIC)

ACTIVE SURVEILLANCE*: Medical Diagnostics

Pilot Program

ENVIRONMENTAL SURVEILLANCE DoD/DHS/DHHS

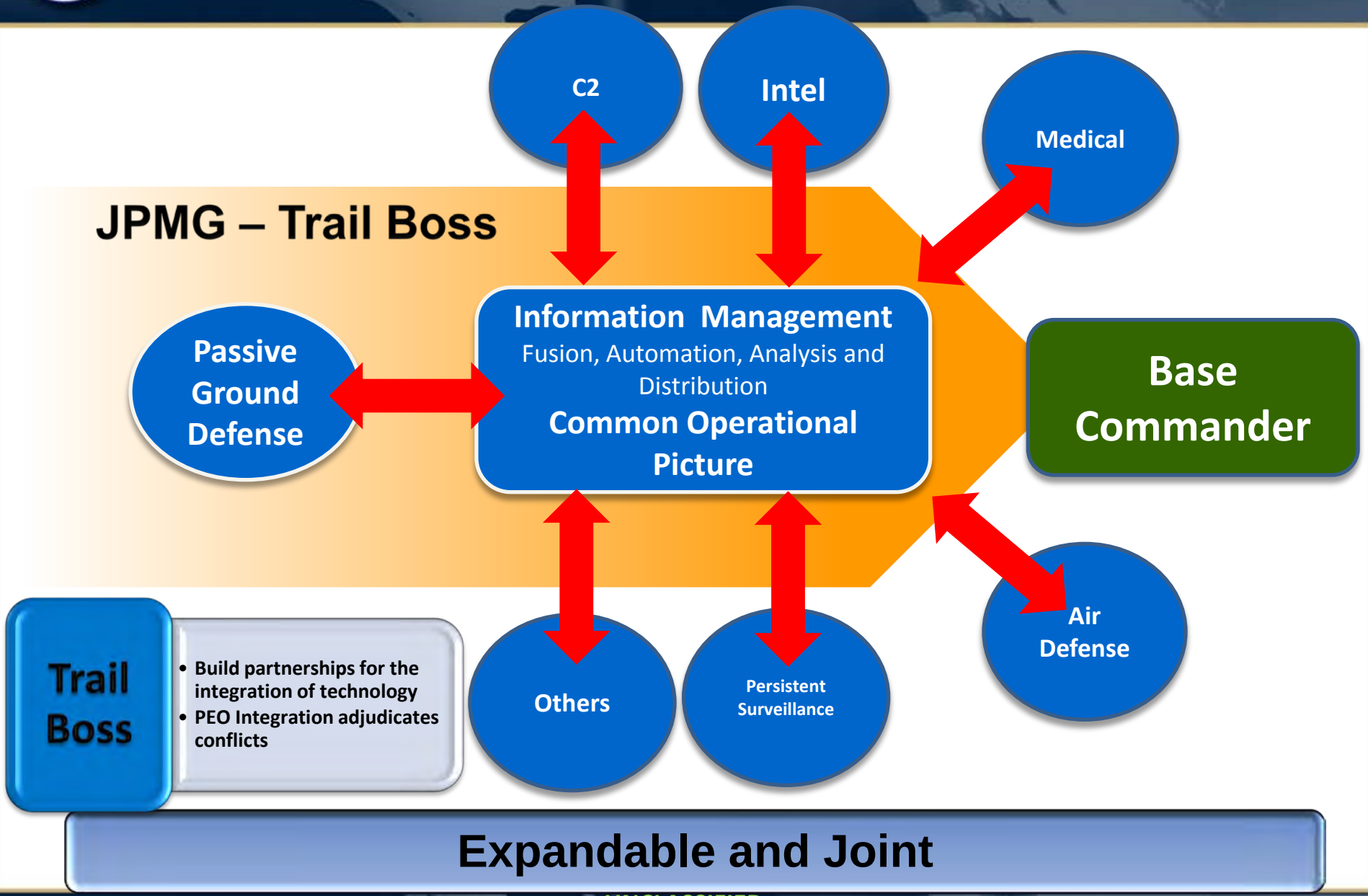
Existing

STANDARDIZED DATA MINING (Syndromic Surveillance)

Existing

INTEGRATION*

IBD Trail Boss



Mission and Charter

CHEMICAL BIOLOGICAL DEFENSE ACQUISITION INITIATIVES FORUM (CBDAIF)

John V. Wade, CBDAIF Co-Chairman

CBDAIF Charter

- Review, discuss, and recommend initiatives in the area of acquisition excellence.

- Examine industry and government practices that impact the acquisition of goods and services that support the DoD efforts related to chemical and biological defense.

CBDAIF Mission Statement

Develop and encourage the use of innovative procurement and acquisition procedures for supporting and acquiring chemical and biological defense program (CBDP) related goods and services in order to better meet the needs of all stakeholders in the process.

CBDAIF Operation

- Formed from NDIA Corporate Membership consisting of team members representing ten various segments of the industrial base
- Permanent members include:
  - JPEO Chemical Biological Defense
  - Special Assistant to JPEO CBD for Current Acquisitions
  - Special Assistant to JPEO for External Affairs
  - Director, DTRA-CB (JSTO)
  - Vice President of Operations, NDIA
  - Director, RDECOM Acquisition Center

Industrial Sectors Represented

- Remedial Construction & Non-Stockpile
- Detection
- Operations & Maintenance
- Protective Equipment
- Filter Technology
- Decontamination
- Small Business
- Systems Integration
- Medical/Pharmaceutical
- Surety Laboratories
- Professional Services

Terms and Procedures

- Corporate representatives will hold senior positions in their respective organizations (usually VP or senior)
- Representatives will serve for 2 years with approximately half the representatives being rotated each year
- Representatives *represent their respective Sectors in an unbiased manner, not their corporations*

Terms and Procedures (cont)

- JPEO-CBD and Vice President, NDIA will appoint an industry Co-Chairperson who will serve for 2 years after serving one year as a representative
- Industry Co-Chairperson will be responsible for providing a recorder / secretary for his/her term.
- CBDAIF will meet at the call of the JPEO CBD.
- Topics of interest will be solicited from members, and interested government agencies.
- Subcommittees will be formed as necessary to evaluate specific topics.

Current Industry Membership

Industry Sector	Representative
Remedial Construction and Non-Stockpile	John Ferriter, SAIC
Detection	Bill Gural, General Dynamics
Operation and Maintenance	Joe Pecoraro, Parsons
Protective Equipment	Gary Dunn, Avon Protection
Filter Technology	David Yokota, Honeywell
Decontamination	Tim Henry, Bracco Diagnostics
Small Business	Barry Corona, Production Products
System Integration	Claudia Randolph, ITT Corp
Medical/Pharmaceutical	Mark Logomasini, SAFC-Pharma
Surety Laboratories	David Mangino, CUBRC, Inc
Professional Services	Nicole Funk, Booz Allen Hamilton
Co-Chairman	John Wade, Battelle
Co-Chairman Emeritus	Vince Nardy, Hunter Defense Tech.

Rotate September 2010

Current Government Membership

Government Representative	Affiliation
BG Jess Scarbrough	JPEO CBD
COL Michael O'Keefe	Acting Director, DTRA
Mr. Dennis Longo	RDECOM Acquisition
Mr. Larry Wakefield	JPEO-CBD, External Affairs
Mr. Douglas Bryce	DPEO for CBD, JPEO CBD
Mr. Gary Olejniczak	Director Systems Acquisition, JPEO CBD
NDIA Representative	
BG Dean Ertwine	VP Army Sector, Battelle Eastern S&T
MG Barry Bates (Ret)	VP Operations
Mr. Michael Dauth	Director, Operations

Sector Companies

- Sector Representatives have a list of Sector Companies in which to receive feedback on topics as well as solicit subject matter for the forum – Help Update & Maintain!!!
- Sector Companies are typically contacted Quarterly for their input – We Value your Input, please engage!!!
- Sector Company lists are maintained by NDIA and are updated as companies are added or change – GIGO!!!
- Interested in becoming sector Company – Contact your appropriate Sector Representative(s), John Wade, and/or Mike Dauth at NDIA

Chemical and Biological Defense Program: Strategic Guidance

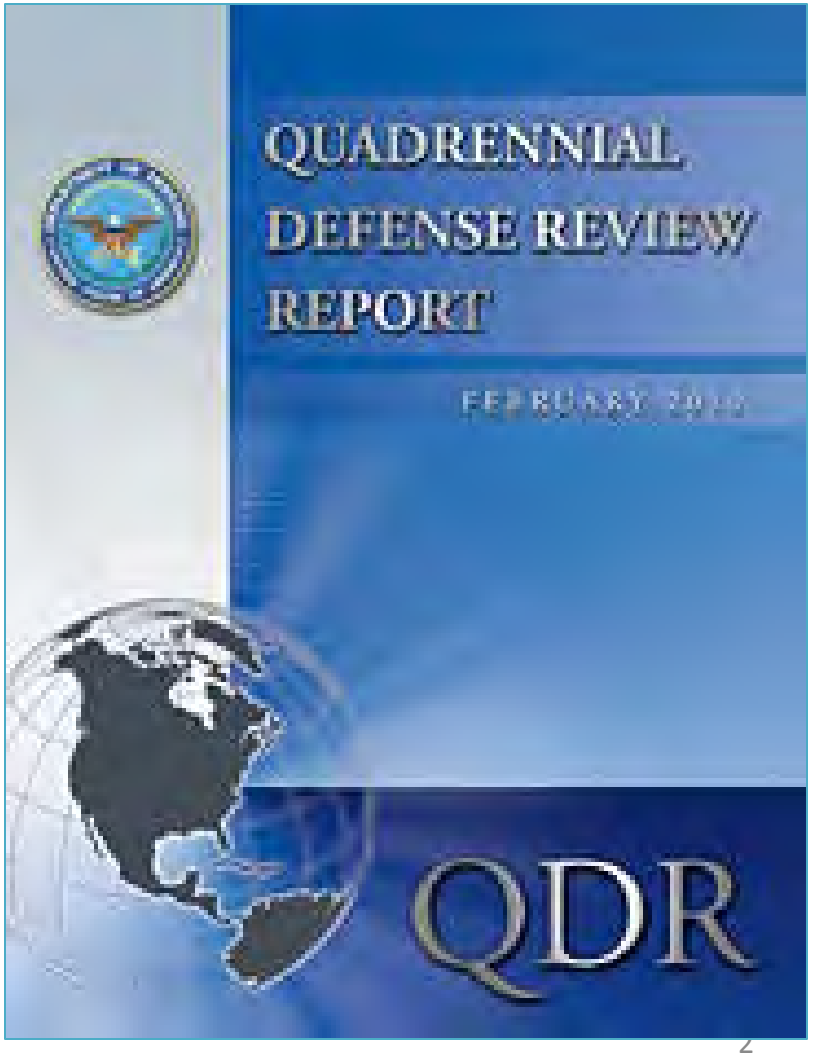
Andy Weber

Assistant to the Secretary of Defense for Nuclear and Chemical and Biological Defense Programs

Fort Leonard Wood, MO
June 23, 2010

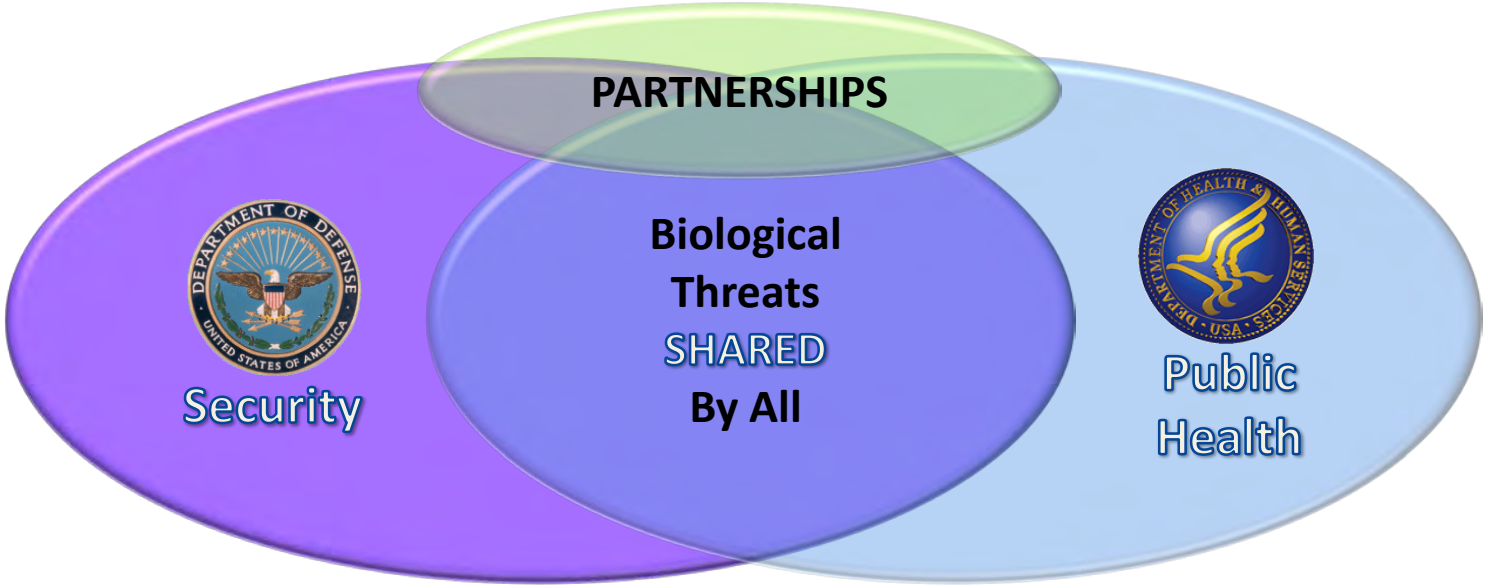
Quadrennial Defense Review

- **Defend the United States and support civil authorities at home:**
  - Improve the responsiveness and flexibility of consequence management response forces;
  - Enhance capabilities for domain awareness;
  - Accelerate the development of standoff radiological/nuclear detection capabilities; and
  - Enhance domestic capabilities to counter improvised explosive devices (IEDs).
- **Prevent proliferation and counter weapons of mass destruction**
  - Establish a Joint Task Force Elimination Headquarters to plan, train, and execute WMD elimination operations;
  - Research countermeasures and defense to nontraditional agents;
  - Enhance nuclear forensics;
  - Secure vulnerable nuclear materials;
  - Expand the biological threat reduction program; and
  - Develop new verification technologies.



Nexus of Public Health and Security

- October 26, 2009, Memorandum for the Secretaries of the Military Departments:
  - "Including Emerging Infectious Disease into the Biodefense Mission Set"

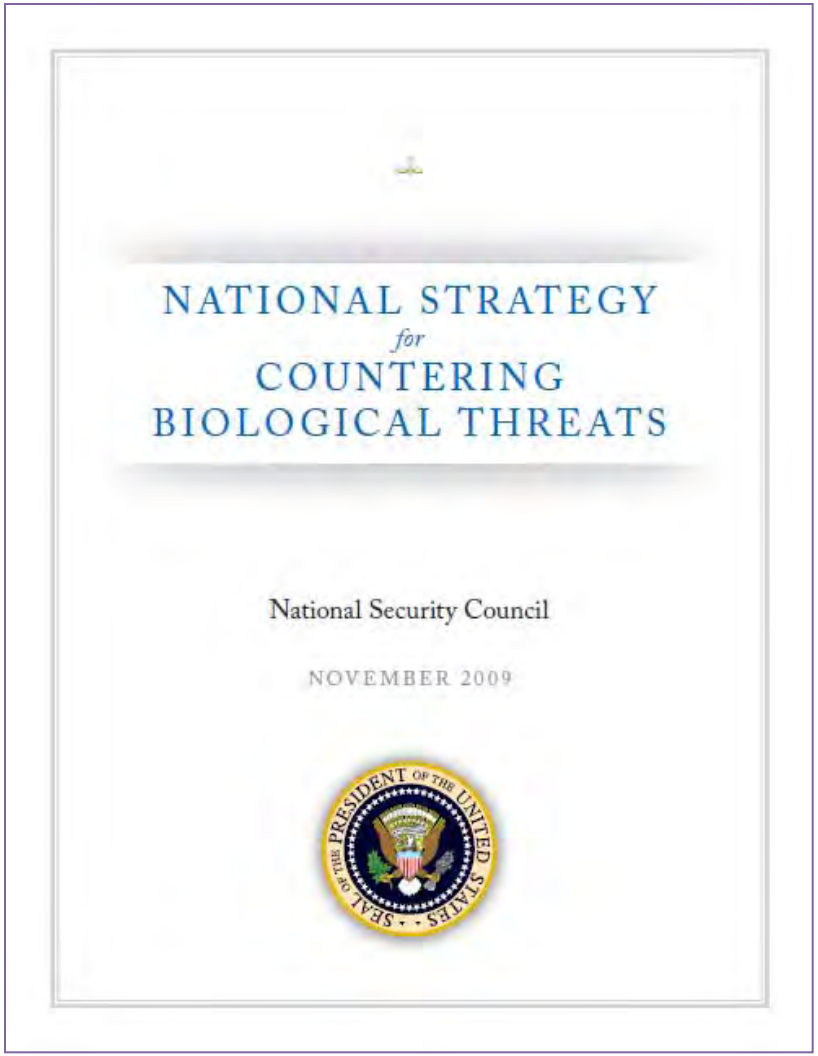


Heightened need for global biosurveillance to detect and prevent pandemics

President Obama's Strategy for Countering Biological Threats

- Goal: **PROTECT** against the misuse of the life sciences to develop or use biological weapons.

- Objectives:
  - **P**romote global health security
  - **R**einforce norms of safe and responsible conduct
  - **O**btain timely and accurate insight on current and emerging risks
  - **T**ake reasonable steps to reduce the potential for exploitation
  - **E**xpand our capability to prevent, apprehend, and attribute
  - **C**ommunicate effectively with all stakeholders
  - **T**ransform the international dialogue on biological threats



Anthrax Weapons Production Facility

Stepnogorsk, Kazakhstan



Large scale fermentation. This is one of 10, 5,000 gallon fermenters. The facility had the capability to produce an estimated 300 metric tons of weaponized anthrax in eight months.



Emerging Biological Threats

- **Established Bioterrorism Programs**
  - Al-Qaeda: Kandahar, Afghanistan
  - Aum Shinrikyo: Tokyo, Japan

- **Call for BW expertise**
  - Al-Qaeda public call for scientists to develop and test biological weapons



http://www.globalsecurity.org/intell/library/imint/images/011031-D-6570C-003.jpg

Tarnak Farms, *Al Qaeda* training camp, Kandahar, Afghanistan

Aum Shinrikyo headquarters



Anthrax Spraying, Tokyo
http://www.cdc.gov/ncidod/EID/vol10no1/03-0238.htm

- **Emerging infectious diseases create an unpredictable source of pathogens**



Bacillus anthrax
http://www.cdc.gov/ncidod/EID/vol10no1/03-0238.htm

- **Proliferation of unsafe biocontainment labs**
  - In areas of high terrorist activity



Thursday 28 Sept 2006, Arab News
Al-Masri also called on scientists to join the fighting in Iraq to develop and test biological or "dirty" weapons.

http://www.globalsecurity.org/security/profiles/images/abu_ayyub_al-masri_1.jpg

- **WMD Commission:**
  - Biological attack more likely than nuclear

10-S-1020

Chem Bio Defense Program

Old: Ensure DoD Operations are unconstrained by CBRN effects

New: Counter Biological and Chemical Threats

Prevent Proliferation and Counter WMD Capabilities Mapping

Nonproliferation	Counterproliferation	Consequence Management

Mission Areas (not sequential)

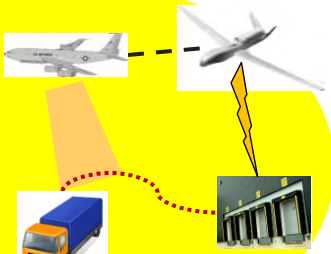
Security Cooperation & Partner Activities → Threat Reduction Cooperation → Interdiction → Offensive Operations → Elimination → Active Defense → Passive Defense → WMD Consequence Management



Prevent



Secure & Monitor



Track



Interdict \ Defeat



Tactical Warning





Hardening



Medical Pretreatments

Detonation \ Release



Characterization \ Decision-Making



Medical Treatment



Forensics \ Attribution

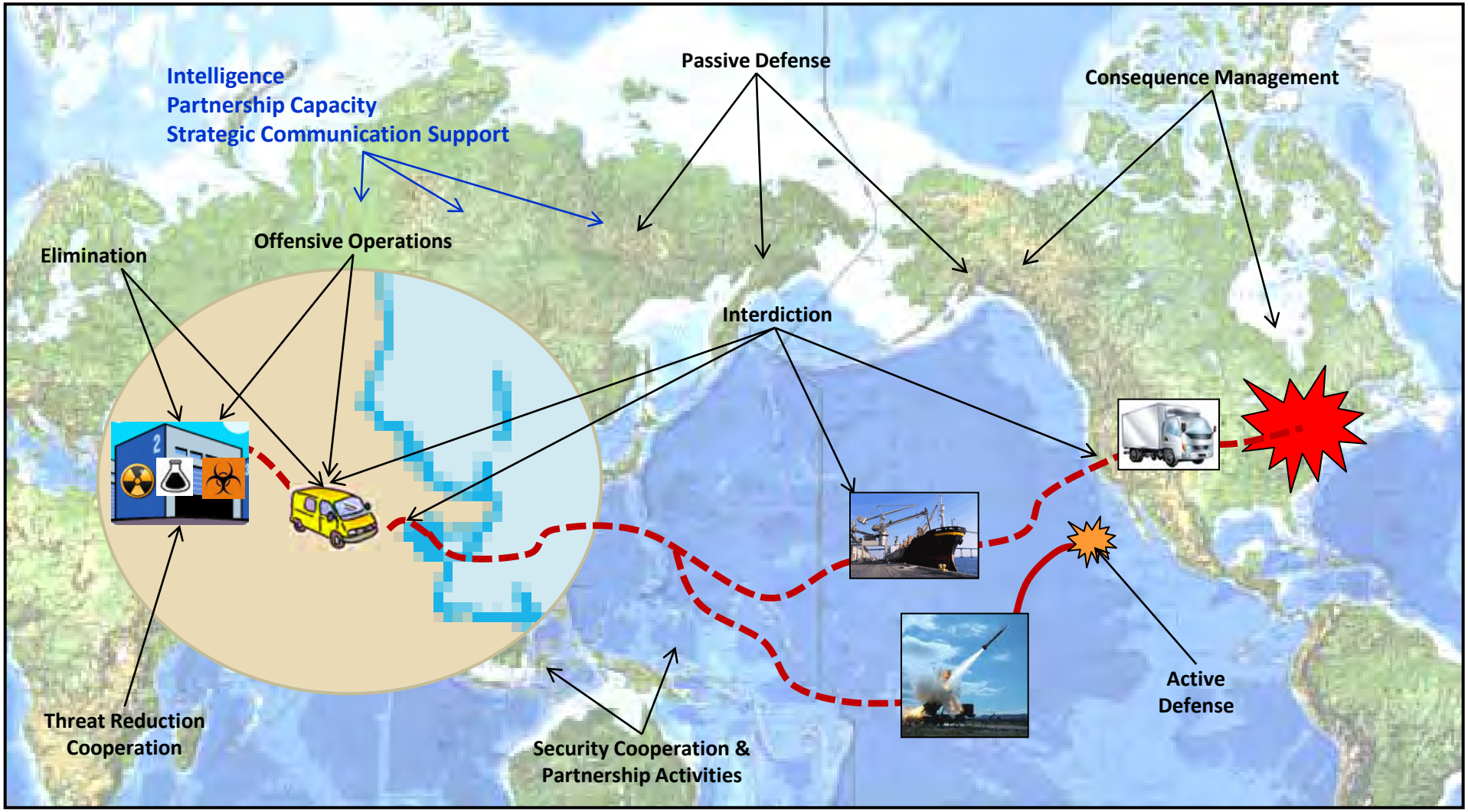


Consequence Management



Restoration

Prevent Proliferation and Counter WMD Operational View



Reducing the Threat at the Source

- Dismantle, consolidate, and secure
- Prevent proliferation, increase transparency and improve standards of conduct
- Build relationships

Priority Obama administration initiatives:

- Countering Biological Threats
- Global Nuclear Lockdown

Biological Threat Reduction Program: Initial Work in the Former Soviet Union

Country-wide laboratory networks confirming diagnoses and conducting research at biosafety levels 2 and 3

Below– Reference Lab in Georgia (2010)



- Objectives:
  - Collection consolidation
  - Safety and security
  - Detection, diagnosis, reporting
  - Sustainability
- Initial Programs in Kazakhstan, Ukraine, Russia, Armenia, Uzbekistan, Georgia, Azerbaijan
- Cooperative Biological Engagement: Global expansion

Bio-Surveillance

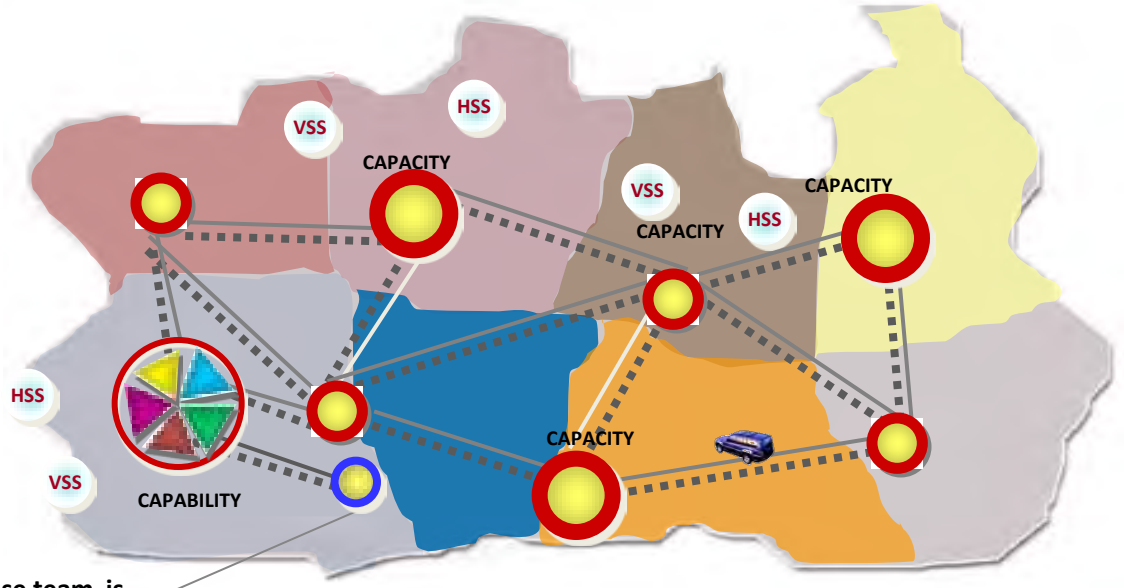
- Importance of bio-surveillance for DoD
  - DoD deploys forces into areas where unusual diseases are endemic
  - Many naturally-occurring pathogens are well-suited to use by an adversary
  - DoD must be ready to help in response to pandemics, whether natural (H1N1) or not (smallpox)
- Advanced/Prompt analysis and diagnostics

"The key to recognizing new or emerging infectious diseases, and to tracking the prevalence of more established ones, is surveillance."

Emerging Infections: Microbial Threats to Health in the United States (1992)

Global Disease Surveillance Network

National-level laboratory oversees integrated veterinary/human health surveillance system



A national response team is deployed to fight outbreaks when regional resources are not sufficient

Emerging Infectious Disease/ Pathogen	
Human diseases/pathogens	Animal diseases/pathogens
Influenza*	Foot and mouth disease
Anthrax*	Rinderpest
Brucellosis*	Sheep, Goat and Camel pox
Plague*	Anthrax *
Tularemia*	Brucellosis *
Crimean-Congo Hemorrhagic fever*	Newcastle disease*
Tick-borne encephalitis	Avian Influenza*
Fevers of Unknown Origin requiring hospitalization	Glanders*
Flu-like Symptoms requiring hospitalization	Swine fevers
	Diseases of Unknown Origin
* Denotes zoonotic pathogen (transferable between humans and animals)	

Regional Laboratories

HSS Hospital Sentinel Site

VSS Veterinary Sentinel Site

National Response Team

Electronic Disease Surveillance System

Transportation

Obama Administration Initiative on Medical Countermeasures

"***We are launching a new initiative that will give us the capacity to respond faster and more effectively to bioterrorism or an infectious disease – a plan that will counter threats at home, and strengthen public health abroad."***

President Barack Obama, January 28, 2010

- Systems-biology approaches, multiple use products, and platform-based solutions
- Regulatory Science and Innovation - Create licensure pathways that are more predictable, transparent, and faster

Countering Chemical Threats

- NTA Rapid Fielding Initiative
- Equipping Specialized CBRN Units
- Chemical Prophylaxis & Therapeutics
  - Bioscavenger Increment 2
  - Improved Nerve Agent Treatment System









Consequence Management

- 2010 QDR: Faster, more flexible CM response forces
- Foreign CM: Building partner capacity
  - Reduce response time - country can respond itself
  - Synchronize foreign CM response training and education with ongoing CWMD efforts
- Supporting state and local authorities
  - Interagency support

Conclusions

- Global security and public health communities working together to advance common goals
- Increase focus on emerging biological threats
  - Infectious Disease
  - Surveillance and prevention networks
  - Advanced Medical Counter Measures / Diagnostics
- Consequence Management

"The question why a preventable disease is not prevented applies to the civil population as well as to Armies."

BG George Stenberg, US Army Surgeon General, 1893-1902



BACK - UP

The Global Partnership

- The G8 launched the *Global Partnership Against the Spread of Weapons and Materials of Mass Destruction* at the 2002 Kananaskis Summit



- G8 Leaders committed to prevent terrorists, or those that harbour them, from acquiring or developing weapons and materials of mass destruction

SOMMET KANANASKIS SUMMIT
CANADA 2002

- The Global Partnership's current mandate is ten years, with an initial focus on Russia and the former Soviet Union

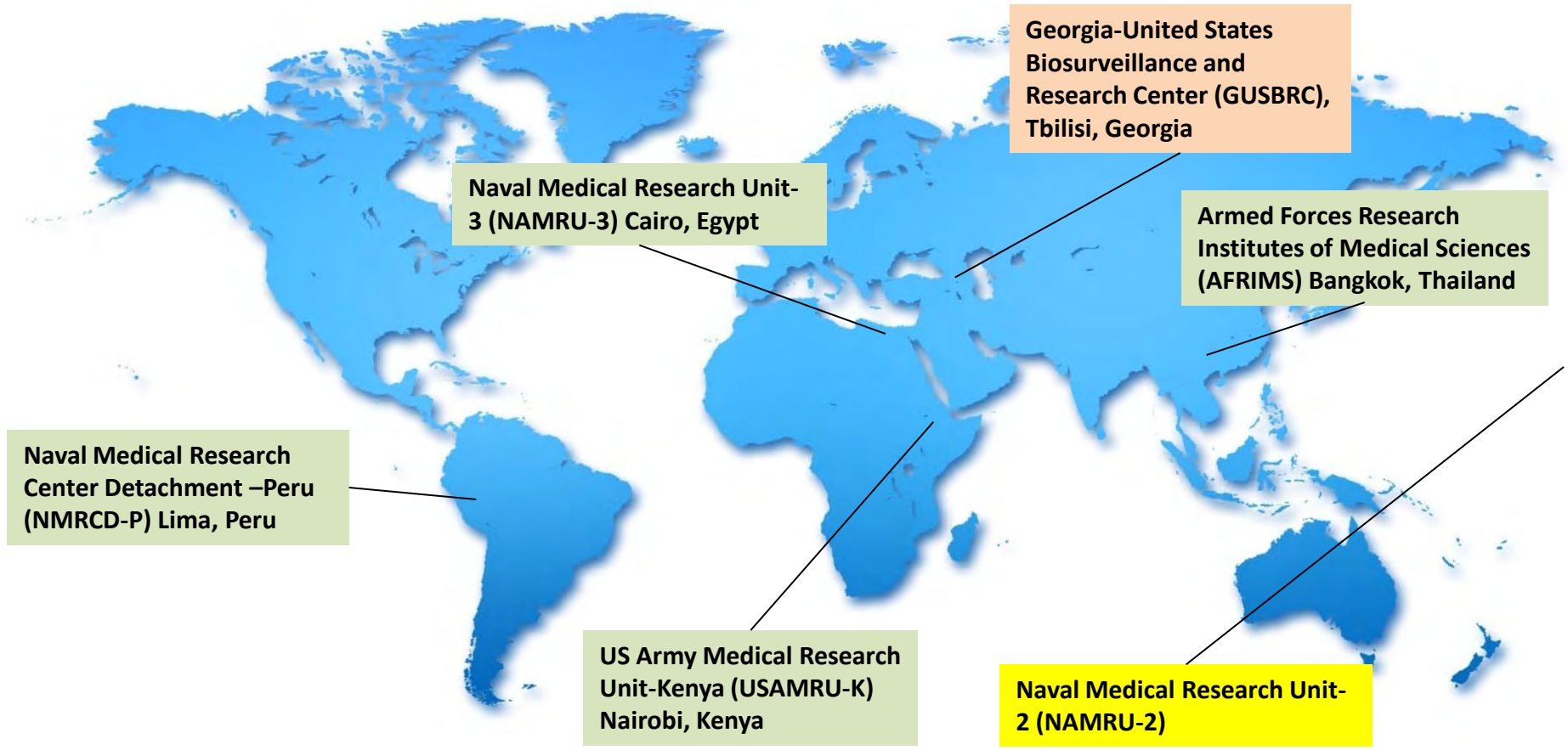
- 2010: Extend GP beyond 2012, including focus on countering the global biological threat.

MUSKOKA 2010
G8
CANADA

DoD Overseas Laboratories

Facilities contribute to the Biodefense mission

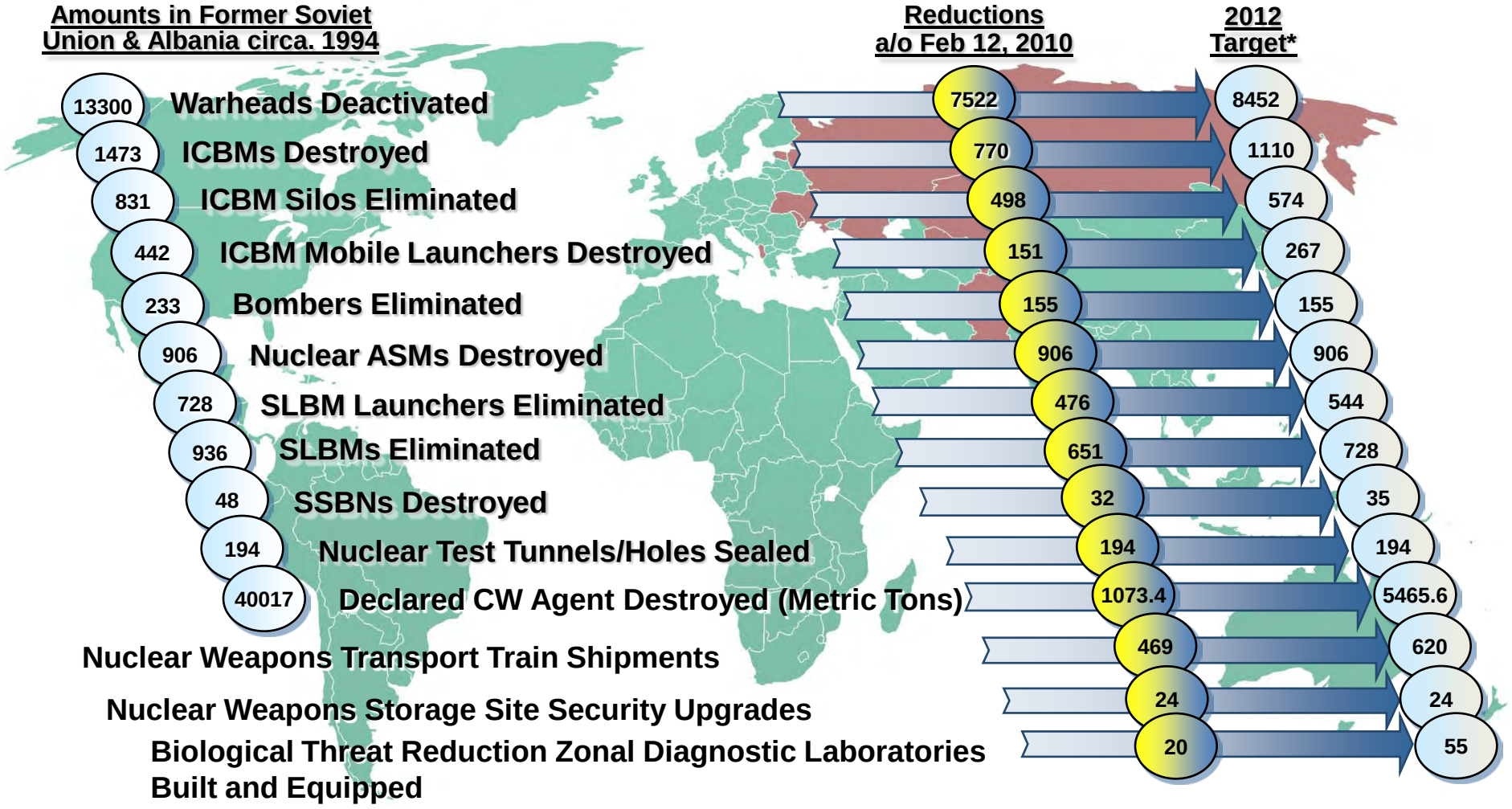
- **Global Emerging Infectious Disease Surveillance (GEIS)**
- **Vaccine Trials**
- **Diagnostic Field Testing**



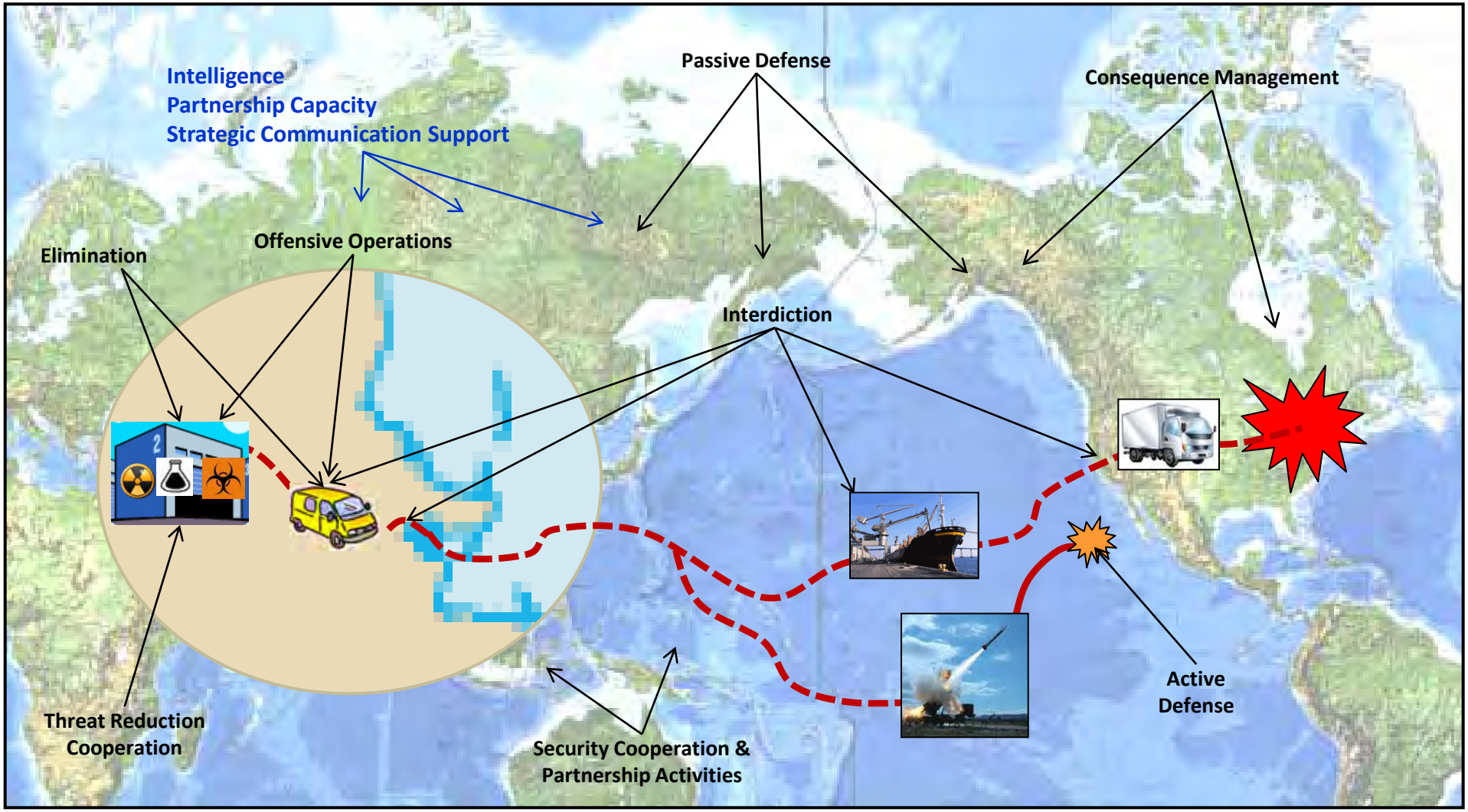
CTR Scorecard

Ukraine, Kazakhstan, & Belarus are Nuclear Weapons Free

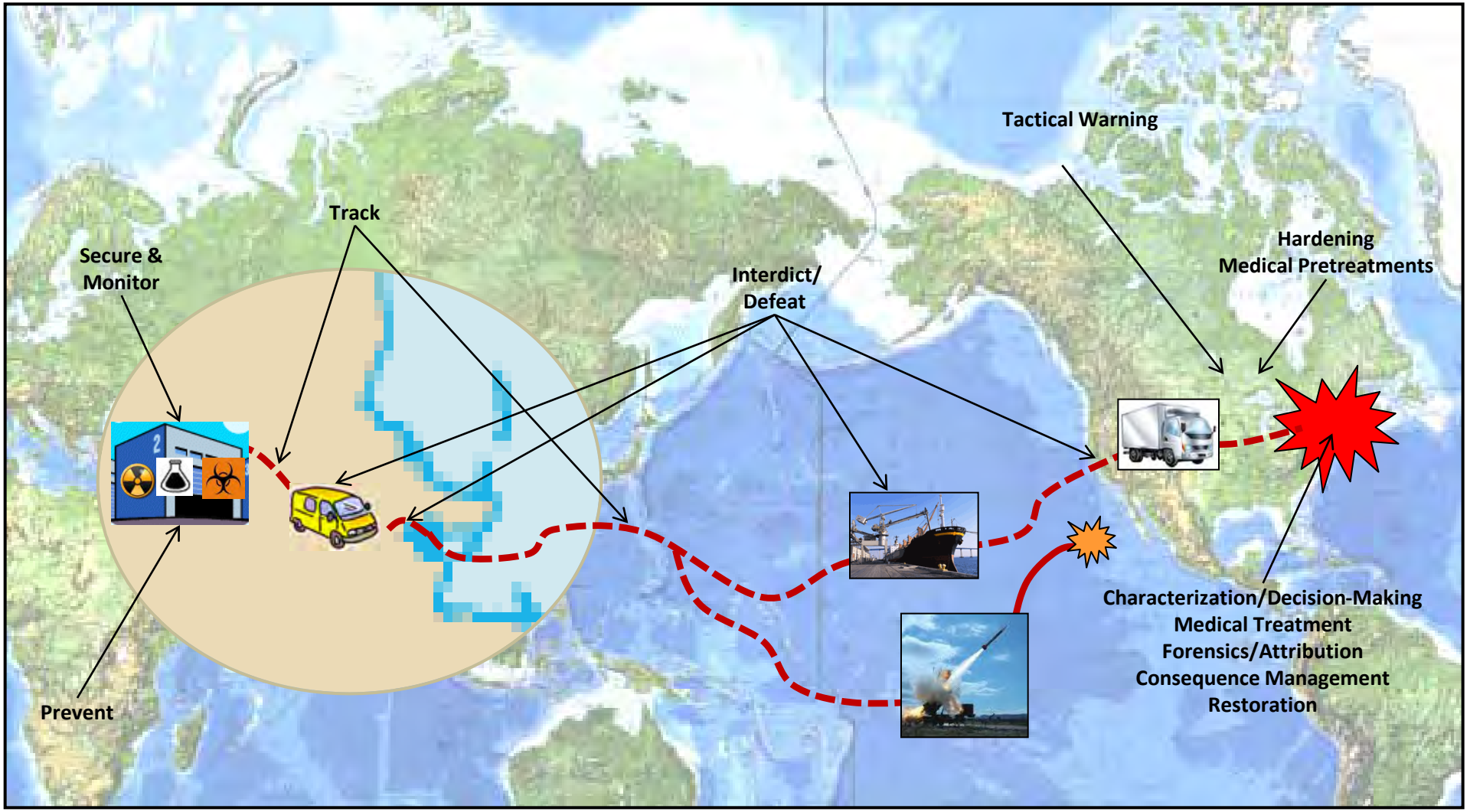
Albania is Chemical Weapons Free



Prevent Proliferation and Counter WMD Operational View



Prevent Proliferation and Counter WMD Capability Areas



Nuclear Security Vision

- Maintain a safe, secure, and effective arsenal
  - Reduce the role of nuclear weapons in the national security strategy
  - Reversing neglect of the nuclear deterrent

- Ensure that terrorists never acquire a nuclear weapon
  - "This is the most immediate and extreme threat to global security"

President Barack Obama

Prague Speech, April 5, 2009

US ARMY RDECOM

U.S. Army Edgewood Chemical Biological Center (ECBC)

An RDEC Facilitating Stakeholder and Partner Success

TECHNOLOGY DRIVEN. WARFIGHTER FOCUSED.

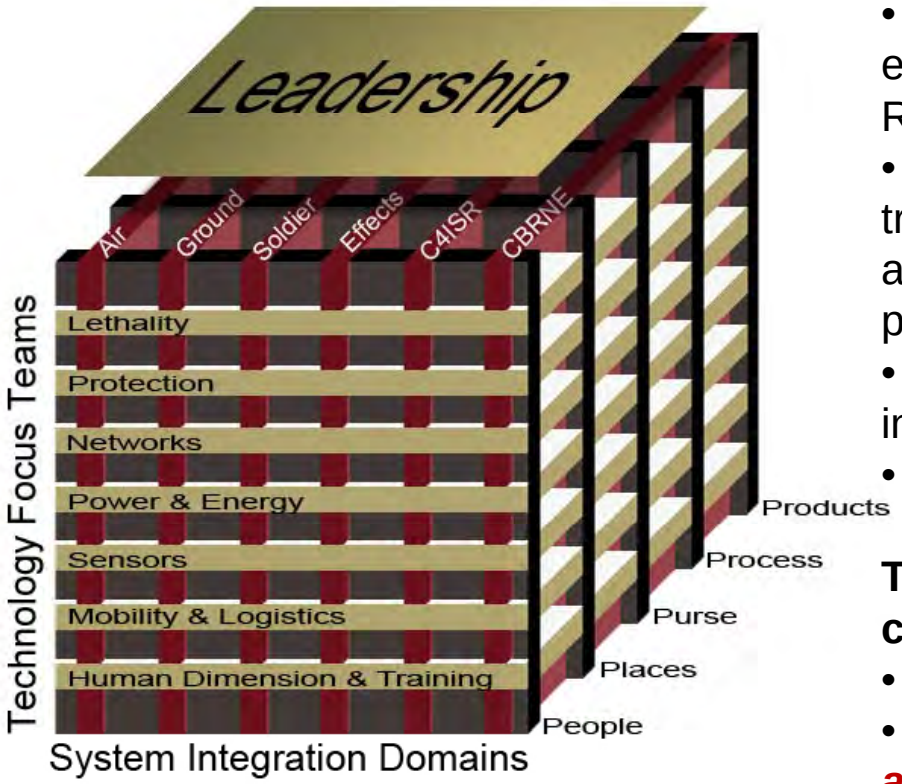
Presented to: Combating WMD Community of Interest

Presented by: Joseph Wienand, ECBC Technical Director

22 JUNE 10

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Working Together to Meet Warfighter Needs: CBRNE SID



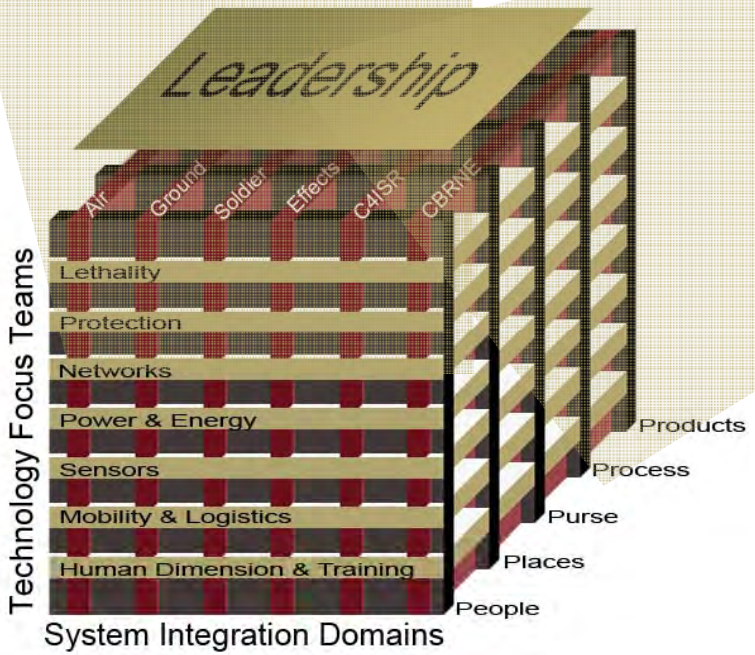
- ***Fosters*** cross-organizational communication
- ***Leverages*** internal research, development and engineering capabilities and knowledge throughout RDECOM for reach-back
- ***Facilitates*** technology planning, development, and transition through the integration of S&T and acquisition program cost, schedule and performance parameters
- ***Supports*** Army priorities and maximizing return on investment across all domains
- ***Allows*** ECBC to better serve the WMD community

The ECBC-led CBRNE SID has unique characteristics:

- ***Joint*** Chemical Biological Defense Program
- CBRNE requirements are managed by ***multiple agencies***: JRO, TRADOC, USACBRNS
- CBRNE is focused on ***defensive capabilities***
- CBRNE systems are serviced by ***multiple LCMCs***: AMCOM, CECOM, TACOM, and JM&L LC

Working Together to Meet Warfighter Needs:
CBRNE SID HEADS-UP Project







TECHNOLOGY DRIVEN. WARFIGHTER FOCUSED.

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Working Together to Meet Warfighter Needs: Analytical Training Facility







Purpose:

- Fulfill Quadrennial Defense Review (QDR) 2010
- Create a high quality analytical training facility required to support key DoD chemical and biological defense training initiatives vital to the Warfighter and the Nation

Benefits:

- Reach back to "Team CBRNE" SMEs at Edgewood
- Increase proficiency in complex detection technologies
  - GC/MS, PCR, Microscopy, Electrochemiluminescence
- Better capability to identify relevant CB threats

Interim Solutions:

- Training to be held in existing Building E5830
- Initial concept of temporary facility being designed by Army Corps of Engineers
- Interim facility scheduled to be operational by FY11



Building E5830

Projected Plans: (UFR)

- Construction proposed for permanent state-of-the-art facility to begin FY12
- Projected cost $7.7M

TECHNOLOGY DRIVEN. WARFIGHTER FOCUSED.

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Working Together to Meet Warfighter Needs: Captain's Career Visit

Aberdeen Proving Ground – Edgewood Campus Visit





Purpose: Familiarize the students with the CBRN capabilities at the Edgewood Campus.

Phase I

Facilitate visit to Edgewood Campus for CBRN Captains Career Course and NCP-52 Nuclear and Counter-Proliferation Course

Phase II

Facilitate visit to Edgewood Campus for CBRN-SLC and CBRN-ALC Courses

Department of Defense Center of Excellence for CBRNE

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ECBC
EDGEWOOD CHEMICAL BIOLOGICAL CENTER
Technology Driven
Warfighter Focused



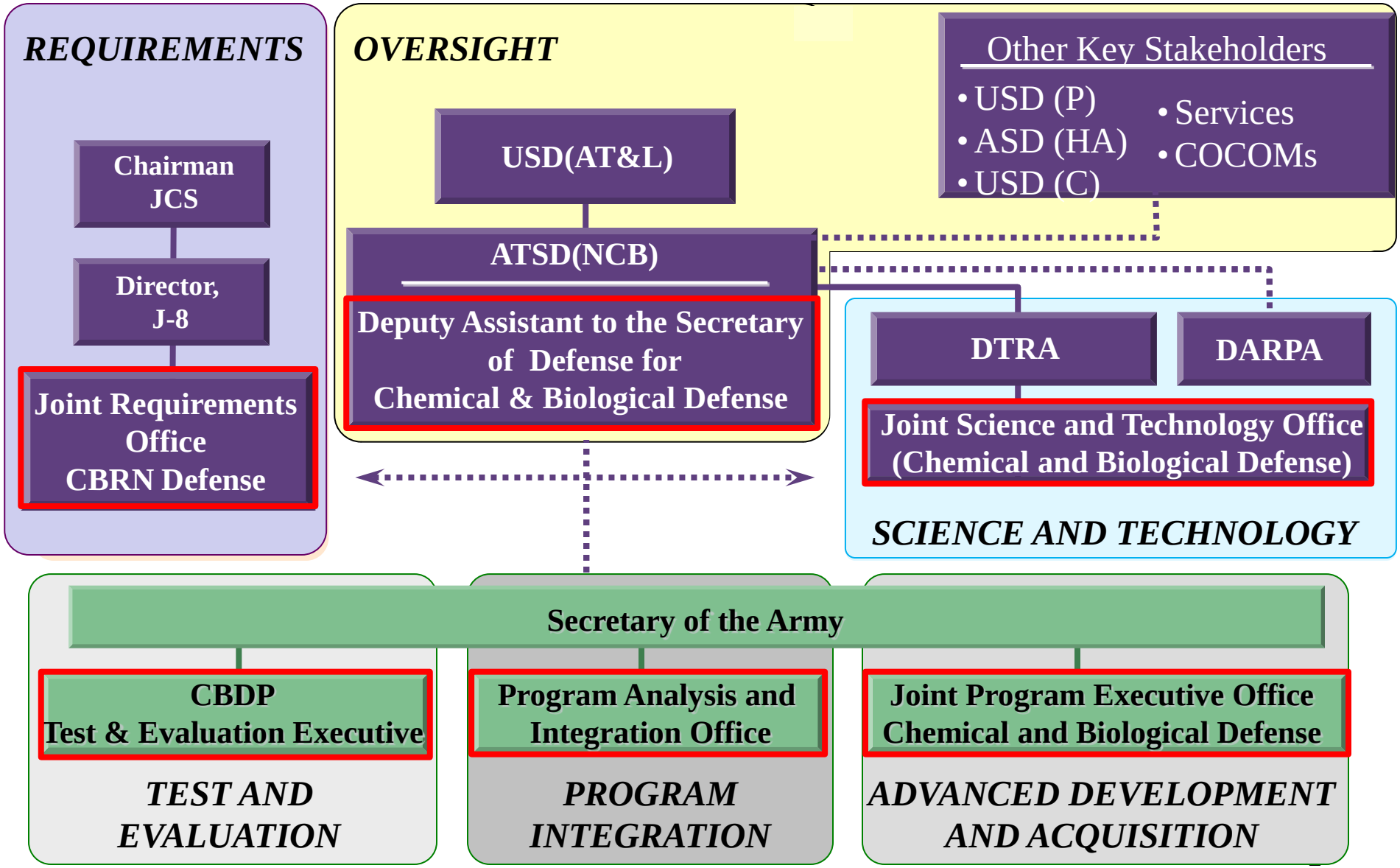


COL Tom Woloszyn

Chief of Staff
DATSD(NCB/CB)

June 23, 2010

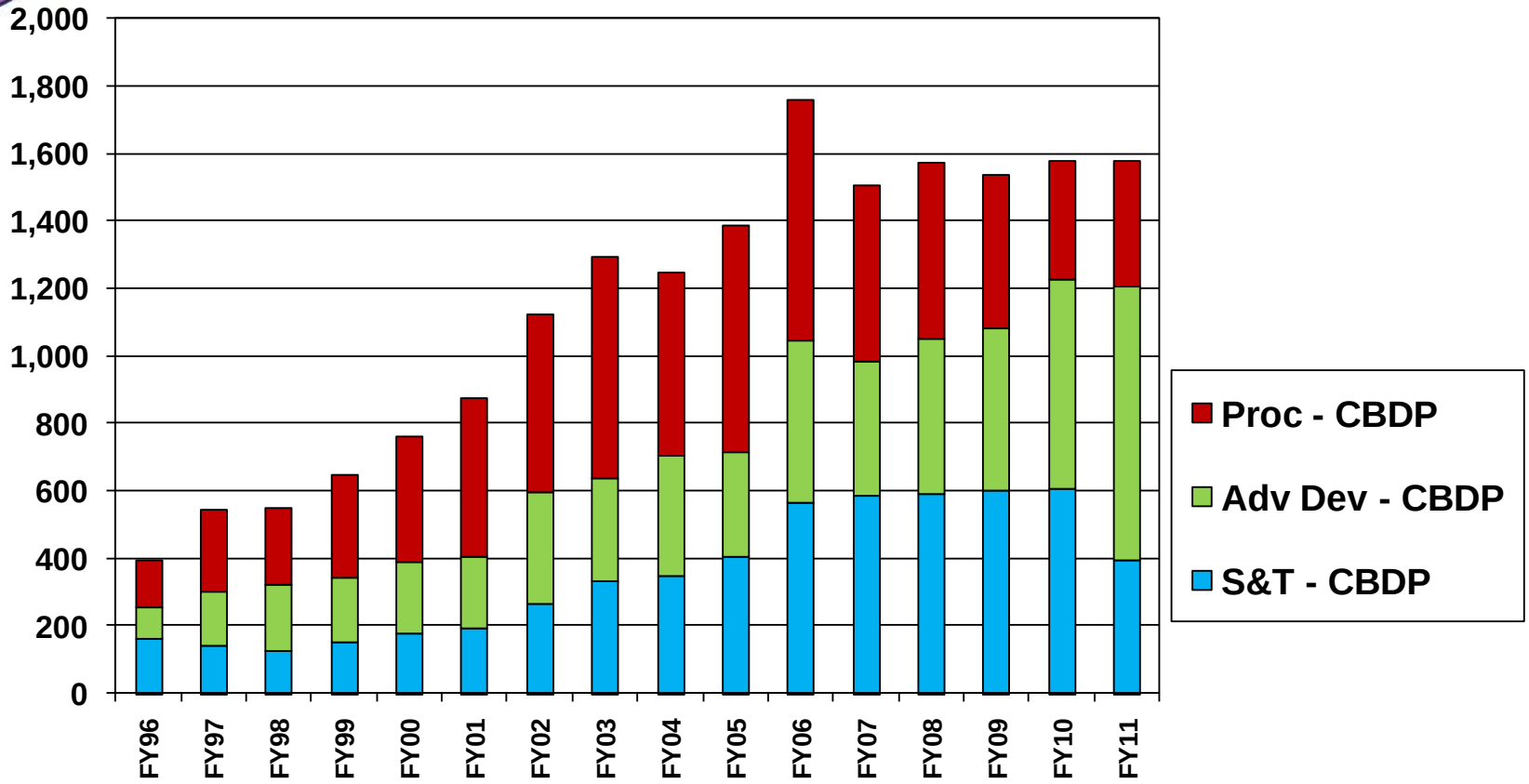
CBDP Organization



ATSD(NCB) CBDP Guidance

- **Defend warfighters *and* citizens against CBRN attacks at home or overseas**
- **Prevent proliferation and counter WMD**
  - Detect, interdict, and contain the effects of WMD
  - **Prevent**, deter, and defense against CBRN armed adversaries
- **Specific areas called out for emphasis:**
  - Biosurveillance for emerging and reemerging infectious diseases
  - Biological Threat Reduction Program (BTRP)
  - Medical countermeasures against emerging threats
  - Transformational Medical Technologies Program
  - Defenses against emerging and non-traditional CB threats
- **Swiftly procure available technologies – streamline and compress timelines**
- **Identify program efficiencies in a constrained budget environment**

CBDP Funding



Trends:

- **The CBDP is directed to identify $441 million in decrements for Fiscal Years 12-16**
- **Numerous OSD cost savings initiatives**